HLN

Full-length

Story by:

Brvan Berry Short Stories

by: Charles Eric Maine

Jon J. Deegan

> Brindley Ford

Also first winning story in our new Competition

Readers' Letters

S. F. Handbook

News and Reviews

Illustrated



AUTHENTIC SCIENCE FICTION MONTHLY

VOL. I. No. 37

ONE SHILLING AND SIXPENCE

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From Earth to the Stars-3.....Cover iv

All characters in these stories are fictitious and imaginary and bear no relation to any living person.



This month we publish our third cover picture in the series "From Earth to the Stars," with a description on the back cover of Man's first leap into space.

Naturally we are impatient to know what our readers think of this truly authentic feature—so why not add your letter to those we are already receiving?

*

One thing that I feel will please all of you is that this month our magazine contains nothing but original stories by British authors. No reprints. No American yarns. We will try to keep it that way, but it's not easy.

Charles Eric Maine, who wrote our Repulsion Factor, is the editor of a technical magazine, a radio engineer and author of the very successful radio play Spacewoys, which has been filmed and is now out in book form. We hope to have more stories from this author—who

writes with the technical authenticity that we prefer.

Bryan Berry, of course, is well known to all of you, or should be. He gives us the long story in this issue, and I believe you will like his Adaptable Mat as another example of what this young British author can do. One of these days he will do something big.

We've brought back Jon J. Deegan by popular request—really so; dozens of letters asked for him. Let me know what you think of his Beyond the Barriers, a story not in his usual vein.

Brindley Ford is the pen-name of an author new to science fiction who has been working hard to make his entry into Authentic. Do you like him?

And then, to complete this month's issue, we have the first winner in our amateur authors' competition. Alan Hunter scored the bull with his *The Piper*, and wins a year's sub-

scription whilst retaining the copyright of his story. Don't forget that we are still open for entries up to 5,000 words. Type your story if you can, please, and include a stamped addressed envelope if you want it returned. And mark your manuscript "Competition."

-

It seems that the big Science Fiction Convention next year will be held in Manchester. Plans are already being made by the Norwest Science Fantasy Club in conjunction with other has groups and fants. The Liverage of the Convention of the Conventi

We hope our readers will do likewise, because these provincial groups have been wanting to put on a big show for years. If this "Supermancon" really comes off, it will give our northern friends a chance to show what they can do. And if they can be a London at the game, all honour to them! Readers who wish to know more about the convention, which will be held next Whitsun, should write at once to Eric Bentcliffe, 47 Alldis Street, Great Moor, Stockport, Ches. Their names will be placed on the mailing list and they will be sure of getting the preliminary report of arrangements made by the Committee.

-

Congratulate me, for my trip to the 11th World Science Fiction Convention is almost in the bag. By the time you read this I shall probably be in Philadelphia having the time of my life and spreading a good word here, there and everywhere for Authentic and for British fandom. I have been asked to give a little speech on British science fiction activity. and I think there'll be a lot of nice things to say. I shall certainly tell them what a wonderful lot of readers we have! Or should I say a lot of wonderful readers?

I am hoping that a future editorial will be written in Philadelphia and will bring you all the news from that fair city. I only wish you could all be there with me.

HJC



by BRYAN BERRY

INIGHT. The voices were low in the little room.
"Your report, Agent 7?"
"We should have only a few more days to wait."

"You have suggested our doctor?"

"I have. He is not yet sufficiently worried about his health to take up the suggestion, however. But within a week or so..."

"I see. And you still have no news of the others? No

attempts have been made?"

"So far as I can tell they have not managed to locate our man at all. I think it quite probable that they are still searching for him on Earth. It was sheer chance, as you know, that brought us here to Mars."

"Quite. We must hope that their bad luck holds out, at least until after the critical period is over. A week or

so, you said?"

Agent 7 nodded her head.
The voices murmured on ...

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TOON—and lunchtime. Hooters sounded over the sprawling length and breadth of Newtown, Mars, and flung their boomings up and outwards into the crispness of the thin Martian air. And from buildings everywhere people made their varied journeys to works canteen and restaurant, on foot, by turbocar, scooterbike, and some-the wealthy ones-by 'copter. The still silence of a city at work was destroyed, ripped into confetti fragments at the signal of the hooters.

Stewart Wesson had lunched early, as usual, and by the time the general mass of the city workers had emerged from their offices he had already finished his meal and had reached the door of the restaurant. He lit a cigarette, feeling disgruntled at the exorbitant price he had had to pay for the imported frozen food from Earth that he had just eaten. Then he started to

wander down the steps to the street below.

And he thought about Earth.

Earth. A long way off. A damned long way off. But did that really matter, he asked himself. He'd left Earth because he didn't like Earth, hadn't he?

No, that wasn't quite right. He liked Earth itself all right. It was the controls and the restrictions and the heavy taxes and the you-do-what-you're-told attitude of the government that he hadn't liked. It was

those things he'd run away from.

But that knowledge didn't help a lot once you really got to thinking about Earth and the way it looked and sounded and smelt. In that restaurant, now, he'd noticed the artificial wax roses on the tables and he'd started thinking about real roses and the scent of them and the fine richness of their petals. That was the sort of Earthian thing you remembered and wanted back again. Roses with the dew glinting in beads all over them, and spiders' webs strung out, sparkling, between the flowers and the fine old garden fence. And the smell of autumn leaves, too, you remembered and wanted back. And rowing a dinghy about in the cool, easy silence of evening on a tranquil lake. And school-days and home cooking and . . .

He shook himself. He'd left Earth for a reason. He'd given up Earth's beauties for Mars' freedom. He'd brought all his money out with him and started up his own general store at Newtown. In Newtown Central Store, Stewart Wesson prided himself, people could get anything they needed. And he didn't overcharge, either. He could have been the richest man on Mars but he didn't choose to be. He smiled a smile that was not entirely without smugness, thinking: I wanted to show those government people that every private businessman isn't necessarily a profiteer, and I have shown them.

It was the ritual of banishing. The thoughts of the roses and the autumn smells must be driven out. They would come back, of course. They always came back—and were always driven off again. Stewart Wesson had the ritual of banishing firmly imbedded in his mind.

He trailed cigarette smoke down through his wide nostrils and surveyed the crowded street. He was a tall slender man with a sensually handsome face, a large head and a neck that looked remarkably thick for a person of his build. He was thirty-five, though he might have been thought nearer forty.

The noise of noon clattered about him and he let

himself become a sponge, soaking it up into himself easily, comfortably: the final piece of the ritual. Here I am, he thought, with plenty of money, congenial work, in a freedom-loving society, in good health...

Good health? He paused in his thinking. A brief frown skipped over his features like a fleeting shadow. Those headaches he'd been getting. He never used to be subject to such things. And he couldn't pin down the cause of them, either; it wasn't as if he'd been under any special strain. Maybe he ought to take his secretary's advice and go and see that Dr. Millbright.

His secretary.

He smiled and his thoughts refused to concern them-

selves with such troubling things as headaches and doctors. Instead they preferred the mental picture of pretty Miss Saunders, his new secretary. Miss Saunders poening the mail in the mornings; Miss Saunders taking dictation; Miss Saunders, so bright, so attractive, so friendly. He was still thinking of her when the voice called out:

"Wess!"

The thoughts dispersed; the dream broke up. He turned.

The man who darted out of the noonday crowd was small and wiry and had a black beard; the black and gold spacemar's dress uniform he was wearing had seen better days but still looked smart. He pounded Wesson's arms, his beard opening to display a smilling mouth. "Wess, you old rogue—"

It took Wesson a bewildered moment to recognise the man, then a further moment to comprehend that this really was the person he thought it was. "Dick," he said, amazed. "Dick McLeod, by all that's holy!"

"Captain McLeod now, Wess, and a slightly plastered Captain McLeod right at this moment!" His beery breath gave proof of this. "How many years is it? Ten? Twelve?"

"Something like that. My God, I don't think I ever thought I'd see you again, you crazy devil. I thought you'd have crashed yourself up somewhere."

"Not me. Charmed life. Charmed life."

They stood looking at each other in the pale sunlight, each searching for and finding, the changes that time makes on the faces of everyone. And then McLeod said: "Come on, I'll buy you a drink and you can tell me all about yourself and what you're doing up here." He caught hold of Wesson's arm and propelled him across the street.

Briefly Wesson recalled the office, his work, letters that had to be got out. Then he shrugged. He was his own boss and didn't have to get back. Besides, one

didn't meet old friends every lunchtime and it would be good to do something on the spur of the moment, for a change.

They walked swiftly and McLeod talked incessantly—of his life on the spaceways, of the long midnight voyages, of the stars like pearls against a velvet backcloth. His words tripped over themselves in their eagerness to emerge.

"But what brings you here, now, to Newtown?" asked Wesson, at last, when they had found a bar and bought their beers and were sitting together at a corner table.

"Vacation. I'm due for twelve weeks' leave."

"And you're spending it here?"

He shook his head. "Not on your sweet life. I'm getting back to Earth as soon as I can. I've been on this experimental trip out to Mercury, see, and the big bugs of Mars Colony decided that they wanted to interview some of the scientists who went with me. Consequently we had to break our journey here instead of returning to Earth right away. I got my leave pass signed at Marsport and stopped over when the ship left so that I could see a couple of pals who're stationed here. I leave for Earth this afternoon."

Wesson sipped at his beer. "How long have you

been away?" he asked.

"Seventeen stinking months," McLeod replied, his beard wagging. "And will I be glad to get back there! But tell me what you've been doing. How did you get

up here on Mars?"

Wesson explained how he got there. He explained his dissatisfaction with the way life was lived on Earth, and he told of how the legacy from his one relative had made his trip possible and had been the foundation on which he had built up the Newtown Central Store.

"You mean you own the store?" McLeod demanded, mouth agane.

"That's right."
"You're rich?"

"I suppose so."

McLeod waved his hand vaguely. "Then what are you doing up here now? Why don't you go back to Earth and have a good time now that you've made money? You can't tell me you like living up here on this antiquated dust-bowl?"

Wesson laughed, "It's not as bad as all that, You

get used to it.

"I don't doubt that. You can get used to anything, but that doesn't mean you have to like it. Don't you ever want to go back to Earth? Don't you ever feel that the sight of a green field and an oak tree and a few cows seems just about the most important thing in the universe?"

"Well," said Wesson-and then stopped, Green fields. Roses with the dew on them. The smell of autumn leaves . . . "Yes," he admitted. "Yes I get thoughts like that, too. But then I think everyone does when they're away from-well, from the things they love."

McLeod looked at him narrowly. "Why don't you

come with me?" he asked suddenly. "Back to Earth?" Wesson gasped.

"Back to Earth."

"Don't be a fool, How could I? My business is

here."

McLeod shrugged. "I didn't mean go back for good; I meant why not take a vacation? You've got the money to do it and we could have a pretty good time together.

Tell me, when did you last take a holiday?" Wesson struggled with his thoughts. "Three years

ago," he said at last, "But . . ."

"There you are. Three years without a break." "But I couldn't go back with you; you're leaving this afternoon, didn't you say? Well, you can't expect me to get packed up and everything right now!"

McLeod emptied his glass and banged it down on the table. "And why not, may I ask?" he demanded. "You're one of the few people in the position to be

able to do what you want to do. I take it that the staff of Central Store could manage somehow, to keep the wheels turning while you were away?"

It was fantastic, crazy. Of course he couldn't go. But those green fields! Roses with the dew on them. "What season is it down there in England now?" he found himself asking.

"The merry month of May," said McLeod, Think of it, said a small part of Wesson's mind. urgently. You've not been away from Mars since you got here and you've never taken a proper holiday, either. And Dick's right: you're one of the few people who could just pack up and leave. You're your own boss. Think: May in England, on Earth. You need a rest, you know, the voice continued, persuasively, growing stronger. All these headaches vou've been getting aren't doing you any good. A holiday would probably clear them up for you.

"If you say 'yes' I'll visor the booking office at Marsport and reserve a seat right away," said McLeod.

"What time does the rocket leave?" murmured Wesson, amazed at the words he was speaking vet unable, somehow, to control them.

"Five o'clock. Passengers in their seats by four forty-five. That gives you-" He looked at his watch "—four clear hours to pack your gear, draw some cash out and explain things at your office." He stood up abruptly, smoothing his uniform fussily. "I'll go and visor the booking office and reserve a seat for you right away."

Wesson sat at the table, stunned. What had he done! He was still sitting there and still equally bewildered when McLeod came back from the visor booth to report that he'd reserved a seat on the five o'clock rocket. "If you've got things to do," he said sternly, hands on hips, "you'd better see about doing them." Wesson stood up. "Look, Dick . . ." he started.

McLeod held up a hand and frowned. "Don't you try and back out on me now. You get on your way and get yourself packed up. I'll see you at the spaceport some time between half four and five." He turned Wesson round and started gently urging him towards the door, saying as he did so: "You'll thank me for this once we've left Mars behind. You'll be so glad to set your feet on old Terra that you won't want to leave it."

Minutes later, walking down the street, alone, Wesson started once more to think about Earth. The familiar symbols sprang magically and promptly into his mind: the rose, the garden fence, the placid surface of a lake at evening. He started to hum, then to whistle. His stride lengthened . . .

First, the office, he thought. Tidy up the odd bits and pieces. Tell Grigson to take over and get a message circulated through the staff so that everyone knew what was what. After the office, the bank. And after the bank, his own apartment.

When he pushed open the door of the ante-room

to his own office he was still whistling.

Miss Saunders sat at her desk, her fingers flying over the keyboard of the electriwriter, her hair a billow of rich gold. "Good afternoon, Mr. Wesson," she said, smiling.

The whistle died on his lips, "Er-good afternoon, Miss Saunders," he replied, closing the door behind

him. "I've got some news for you."

"News?"

"Yes." He felt suddenly ill at ease; felt more than a little disturbed at the thought of not seeing this wonderful new secretary of his for three whole months. "I'm going away," he said lamely. "A holiday. I haven't had a holiday for a long time. Going back to Earth with an old pal I just ran into." He saw that she wasn't smiling any more.

"You're leaving soon?"

"Today. This afternoon, in fact. Spur of the moment decision." He stared at her with a half-apologetic smile on his lips and saw her start to her feet as he said the word "today." At first he thought it was disappointment and dismay that he read on her face, and he felt a thrill of pleasure. She doesn't want me to go off and leave her, he thought. But that impression was momentary. An instant later he realised that he had been mistaken. It wasn't disappointment or dismay on her face. Instead it was something like—

Fear.

Fear, he thought in amazement. But what did I say

that could make her afraid?

The look vanished from her face instantly and her line returned. Wesson wondered whether he could have imagined the whole thing. "Well, Mr. Wesson," she said, "I hope you have a good time while you're away. I didn't even know you were planning a holidav."

"I wasn't. I met this friend of mine unexpectedly and he more or less talked me into it. I'm leaving on the five o'clock rocket from Marsport, so I shall have to be snappy. I shall be away for a good few weeks I expect, but Mr. Grigson should be able to take care of everything." He gazed at the newly typed letters on her desk and went on: "I'll sign all the letters you've already done and you can take the others down to Mr. Grigson to sign later on."

"You're leaving for the spaceport right away?"

He looked at her curiously. "No," he said, "but I was to leave myself as much time as possible to pack. I shall go to the spaceport from my apartment." Is she crazy? he thought briefly. What would I want to leave now for? Marsport is under half an hour's journey at most and I just told her the rocket doesn't leave until five. He walked across to his own office and pushed the door open, telling the girl to bring in the letters as he did so.

"And now," he said, seated, as the letters were put in front of him, "please ask Mr. Grigson to come up

here. I've got to break the news to him."

She nodded and went out. He watched her go and he stared hard at the door for some seconds after she had closed it behind her. Then he heard her clicking the inter-office visor switches and asking the operator to contact Grigson. And while this was happening the thought returned to his mind; why had she been afraid when he had told her he was leaving that same day?

He shrugged irritably and turned his attention to

the letters in front of him.

The interview with Grigson was quite short. Wesson knew the man well and was confident that he would have no difficulty in carrying on while he himself was away. He gave his secretary the note which was to be circulated to the staff and dictated a brief letter to be sent off to some of his main customers who were also personal friends, telling them of his holiday plans, After that came the shaking hands with the heads of departments and the good wishes for his trip and the summoning of a turbo taxi from a nearby rank. He was already outside the building when, on a sudden

impulse, he decided to say a final good-bye to Miss Saunders. It would be a good opportunity to show her that his interest in her was not strictly professional. He could say something like: "Now that I'm on holiday I suppose I can say 'good-bye, Eileen,' instead of 'good-bye, Miss Saunders'?" Yes, that was good. He ran through the words in his mind as he padded back up the rubber sponge stairs to his office.

His feet made no noise on the stairs or on the short corridor above it and he was about twenty feet away from the open door of the ante-room when he thought vaguely that he ought to give a cough and warn her that he was coming back. And then he heard her voice

He didn't know, afterwards, just what it was that made him stop and pause, silently, to listen. Perhaps it was the unexpectedness of hearing her voice at all, or perhaps it was some nervousness within himself.

But he did stop, anyway. He wasn't near enough to hear the voice of whoever she was talking to on the visor, but he could hear her own voice quite easily.

"... But you don't understand," she was saying.
"He's leaving today ... This afternoon... No, he's
going to his apartment to pack first, then he's going on
to the spaceport from there... Presumably by road.
His rocket leaves at five o'clock... I couldn't tell you
sooner, he's only just told me... Made up his mind
lunchtime."

She's talking about me, Wesson thought. She's talking about me!

"... To Earth, yes.... I know it'll be madness, but I can't do anything about it now; he's already left the building..."

Wesson felt his throat go dry.

"...I tell you there was nothing I could do about it...."

A cold hand gripped him.

".... I shall have to leave the rest to you. Remember, he'll be catching the five o'clock rocket from Marsport and he'll be going there from his own apartment..."

An icy numbness flooded through his limbs and he felt his heart pounding, pounding... She's talking about me!

"... Right, then ... Good-bye...."

Wesson heard the sharp clicking as Miss Saunders, his very excellent new sceretary, broke off the visor connection within the ante-room. He braced himself. Something was going on and it concerned him, that much was certain. Further than that . . . Well, the thing to do was find out. Go in and ask her what the hell she thinks she's doing. Investigate. He took a steen forward. Then another steep—a third

He took a step forward. Then another step—a third... He was inside the ante-room in a matter of seconds, and

the ante-room was empty!

Stewart Wesson stared this way and that. Miss Saunders was not sitting at her desk, as he had anticipated, with a surprised, fearful expression on her pretty face. She was not in the ante-room and she was not in the main office. She was, in fact, nowhere to be found.

From outside, at the front of the building, came the insistent hooting of the turbotaxi Wesson had ordered minutes earlier. "Time to be going." he said, aloud, to himself. But what was going on? He swore softly and stepped across to the visor and examined it. So far as he could see it had not been tampered with in any way; no recording spool had been fitted. He drew a deep breath and scratched the back of his neck. Someone had used that visor a few seconds previously, that much was certain. He was one hundred per cent. certain that the voice he had heard had been that of his secretary, but what had happened to her? How had she managed to do a disappearing act from the two rooms that had no other exit save the one he himself had used to enter? And what...

The gentle sound of feet padding softly on the rubberoid flooring of the corridor outside cut off the flow of his thoughts and he moved away from the visor set and peered out.

"Ah, Mr. Wesson, sir. Your taxi's waiting outside,"

said the young man as he entered the room.

Wesson nodded, relaxing as soon as he saw who it was. One of the men from the enquiry department downstairs, "I just came back to have a last word with Miss Saunders but she seems to have—disappeared." The aptness of the word—which he had used quite unconsciously—made him wince.

"Shall I ask the taxi driver to wait, sir?"

Wesson looked at the electriclock and frowned. Disappearing women or not, he had too many things to do and too few hours in which to do them. "No," ne said, shaking his head, "I'll have to leave this other business."

He walked out, accompanied by the young man, and strode down the corridor and down the stairs with a frown on his face and a voice within his mind saying: Coward. You could spare a few minutes, if you wanted to, to get this business cleared up. The trouble is that you don't want to. You don't want to find out anything

that might make you alter your original opinion of this precious secretary of yours. You're running away, that's what you're doing. Running away.

"Is something the matter, sir?"

"Matter? No, why?"
"I thought you spoke."

Wesson shook his head impatiently. They had reached the ground floor. Everywhere was bustle and coming and going through the great glass doors. Outside stood the taxi. Wesson looked round him somewhat furtively, somewhat eagerly. She was nowhere in sight.

"Have a good trip, sir," said the young man, holding the door open, smiling pleasantly.

"Thank you, thank you," said Wesson.

Coward, said the voice, harshly, within his head. He gave his address to the driver, got inside and sank back on the rubber sponge seat while the vehicle got under way.

Think about Earth, he said to himself. Think about the holiday you're going to have and things you're going to see again for the first time in years: the green fields, the flowers, the boats on the Serpentine, Big Ben standing up against a sunset.

It didn't work. All through the drive he kept hearing the frightened voice of his secretary speaking the in-credible words he had heard such a short time before: He's leaving today. This afternoom. I know it'll be madness. I can't do anything about it now. I

shall have to leave the rest to you....

What did it mean? A business affair, could that be it? Did someone intend opening up a store in competition and had they planted the Saunders girl there to spy on him for some reason? Certainly her arrival, now he came to think about it, had been a bit strange. His previous secretary had suddenly seen fit to leave without giving notice and this Miss Saunders had arrived, with excellent references, applying for any available secretarial job. At the time it had seemed like a happy coincidence, but now. . . . The worries, the fears and the bewilderments stayed with him throughout the short taxi ride and, too, throughout the time it took him, afterwards, at his apartment, to pack his grips. The seconds and the minutes and the hours of the afternoon paraded themselves solemnly and, one by one, were gone.

Wesson ticked off items on his fingers. Two grips packed; recorded message inserted in the visor; power turned off; call made to the police so that they would know the apartment was vacant. All done. Finished.

He stood in the centre of the lounge with a cigarette between his lips and sweat on his forehead, breathing hard, looking round. And the voices were still insistently there, inside his mind, talking, talking... The voice that was his own, the voice that informed him, over and over, that he should have sought out Miss Saunders and questioned her, not run away in fear of what he might have discovered. And there was the other voice, the girl's voice, speaking on the visor: He's leaving today...this afternoon... to Earth, yes... I know it'll be madness...

He pressed his whitening knuckles into the hollows

of his eyes and cursed. What could it all mean?

And then he felt it starting. The tiny, familiar pain at the base of his skull. The pain that he knew full well would feed and grow and bloom up and up in a vast, mushroom growth of agony.

They're becoming more frequent, he thought as the pain grew in intensity. The last one yesterday evening; now another. I'd better visor for a taxi right away, before it gets too bad. I don't want to go out cold, like I did yesterday, and miss the rocket. Dann these

headaches!

Ten minutes later, within the speeding turbotaxi, his luggage beside him, Wesson sat with sweat running on his face, his mouth narrowed to a thin red line, teeth gritted and lips pressed back upon them. There was a vast, feeding fire inside his head that had consumed all his fears, all his bewilderments, in its angry hunger.

There was no room, even, for a thought of Earth, for a vision of a green field or a sheltered, country stream. There was only the fire.

The fire burned. The fire throbbed inside his head and sent exploring, lapping tongues of itself down into his neck. It felt cautiously about his eyes and he snapped his eyelids down in self defence. No good. The fire persisted. Somewhere a voice was speaking . . .

"You all right, mister? You look as though you're going to crack up. You want to get out?"

Within the flame, within the red heat, he summoned his strength. His tongue and his mouth formed words: "No, I'm all right. Keep going. Keep going. . . . "

"I think I'd better stop. You look as though you need

a doctor."

He couldn't object any more. The fire had burned away his tongue. Vaguely he knew that the vehicle had halted. A sudden coldness told him that the door had been opened. A distant sound informed him that, somewhere nearby, another vehicle had pulled up, Voices....

"Looks like he needs a doctor."

"That's all right, I know him. Stewart Wesson of the Central Store, I was coming along behind you and I thought I recognised him. Coincidence, Lucky, too. I know his doctor. Dr. Millbright, I'll take care of him."

"Well, I don't know"

"Come, come, man, this chap's sick. We can't waste time arguing. . . .

The voices faded out and were lost in the harsh, crackling pain-heat of the devouring fire. . . .

THERE was the sound of a waterfall. There was no light but only a great darkness that folded itself about and about and was one with the vast roaring of the waterfall that throbbed through him and reached down below flesh and muscle and tendon and tissue to pulse deeply and purposefully along the marrow of his bones. The booming and the midnight continued on and on.

He did not move. Movement seemed an alien thing to him; he was a mind and no more than that: a mind in a great darkness; a mind floating along a vast midnight hallway onto which, occasionally, a door would open. Then the mind would catch brief glimpses of what lay outside the dark, would peer, with great caution, into outer rooms that each held a picture taken from its own experiences of past happenings.

In this room, for example, there is a scene of people bending over someone on a low, white table. There are voices....

"You were very lucky. You're sure that taxi driver

did not suspect anything?"

"He was dubious at first, but I doubt very much if he'll try to cause any trouble. Anyway, I mentioned your name, so if he does decide to check up you'll be able to assure him that everything's all right."

"Of course. Well, my friends, all we've got to do now is keep him safe until after the critical period has passed."

In another room—the man is stretched out on another

low table; above him a harsh light blazes down. Held against his skull by tapes are two terminals from which wires run to a bank of control switches above which is something like a visor screen. A man adjusts a switch, turns a dial. A pattern of coloured lines appears on the screen. Voices speak...

"Another week, do you think, or more?"

"I don't know. Hard to say. For one of our own people I'd say three or four days only, but with him it's more difficult. His reactions to the pain are totally different, of course, since he doesn't know what it is."

The vagueness and the sense of isolation vanished. The mind became aware, in the darkness, became aware that it was not an entity itself but merely a part of an entity. And that entity was—

The man on the low table.

Wesson moved in the darkness. The roar of the waterfall subsided to a deep and pulsing throb, a steady beating. His heart.

He opened his eyes cautiously and the darkness was no more.

He was in a room illuminated by dull amber wall lights. The bed in which he lay was soft and comfortable and, as his eyes took in the room and its furnishings he became aware that he was in some kind of a hospital, perhaps, or a nursing home. He felt a sudden sense of enormous relief, the cause of which he could not immediately determine. Then he realised—the pain in his head had gone; somehow the fire had been quenched. And remembrance of the pain sent his memory back to the taxi ride and all that had preceded it: the holiday, the rocket, Earth, Dick McLeed waiting for him. I've got to get out of here, he thought wildly, and then as he made the decision and the initial effort towards movement, he discovered that something was wrong with his limbs.

I'm tied down, he thought. But it wasn't that. It was a feeling of enormous weight within his body. He was still struggling to move his legs when the voice

spoke:

"Coming round all right?"

He couldn't move his neck sufficiently to see who had spoken, but a moment later a man moved into his line of vision; a tall, middle-aged man with grey hair and an engaging smile. He used the smile on Wesson, "You've been drugged, Mr. Wesson," he said easily. "The effects are wearing off now, though, and you'll soon be as right as rain. We had to give you something to deaden the pain and keep you resting for a while." The man smoothed his already tidy hair delicately, fastidiously.

Ten thousand questions thundered in Wesson's mind, each demanding to be voiced before the others. "How-how..." he croaked. "How-did-I-get-here?"

"You were brought in a car. You collapsed in the taxi, remember, and someone who knew you happened to be passing and brought you here."

Wesson tried to think back. He remembered the

taxi, remembered the tearing, raging fire within his mind—and that was all. But wait—there was something else: a hazy memory of voices talking even as the red pain enveloped him. Voices and—a name. "Dr. Millbright!" he said, staring at the man, remembering through the vagueness, through the baze, through the swirling darknesses from which he had so recently emerged. "You're Dr. Millbright."

The man nodded, brightly. "That's correct, Mr. Wesson. Did you recognise me or was that just a good guess?" His eyes narrowed very slightly as he spoke.

"I-guessed," said Wesson, "My secretary advised me to see you about these headaches of mine." He wanted to say much more, wanted to sak so many more questions, but as his mind returned to full consciousness he became aware of the need for caution, He didn't want to put the other man on his guard if it could be avoided. He didn't yet know what was happening to him, or why it was happening, but he remembered sufficient of the events preceding his black-out to realise that something more than a little odd was going on, and that he himself was in some way concerned in it.

"Your secretary?" There was something besides idle

curiosity in the words.

"Yes. I mentioned these headaches to her and she told me a friend of hers had had similar troubles and that you'd cleared them up for him. She advised me to visor you and fix an appointment but somehow I never got round to it."

The doctor chuckled and examined his fingernails. "Well," he said, "you're here now, and that's all that matters. I think we should be able to get this trouble of yours all out of the way inside a week or so. I've given you a thorough examination and located the cause of these pains you've been getting."

"Yes?"

"Nothing wrong that we can't put right, though it would have been better if you'd come to me sooner.

I should think you'd be in here for about two weeks, maybe three." He smiled the easy smile. "Nothing too terrible in that, is there?" "But what's wrong with me?" Wesson demanded

angrily. "Something quite simple and rather commonplace:

a piece of bone pressing on the occipital lobe of the cerebrum. The operation will be delicate but, nowadays, not a very serious one. You've got nothing to worry

about, Wesson, nothing at all."

Occipital lobe, thought Wesson, Occipital lobe. He forced himself to remember what little he knew of the structure of the human brain. Didn't the occipital lobe have something to do with sight? He was sure it did. But if that was the case why wasn't his power of sight affected? He'd blacked out, yes, but then that had been because of the pain generally, hadn't it? And anyway, wasn't the cerebrum the part of the brain at the front of the head? And didn't his pain start round at the base of his skull, near his neck somewhere? He frowned at the doctor and opened his mouth to speak. Then he closed it. Caution, whispered the inner Wesson. Caution. "I'm glad to hear it's not serious, doctor," he said. "When do you intend to operate?"

Again the almost imperceptible narrowing of the eyes. Again the easy smile. "Ah, well, I've got to make one or two more X-rays before I tackle that," he said. "But you needn't have any fear of the pain recurring before the operation. The drugs we use here are pretty

effective in cases like yours."

"But you said it would have been better if I'd come here sooner," said Wesson. Then another thought struck him. "How long was I unconscious?"
"Unconscious?"

"How long have I been here, then?"

"Twenty-seven hours or thereabouts. But now you'd better take things easy while the effects of that drug wear off. Someone will bring you some food shortly. We don't want to starve you." He gave a conspiratorial

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laugh as though the two of them were sharing some vast joke. Then he walked across the room to the door. "I'll be back later on," he said.

After he'd gone Wesson relaxed those parts of his body over which he had control. He had to think things out. He had to correlate and integrate the things he already knew and try to make up a complete picture—even if it was the wrong picture.

The room was quiet. No clock's tick disturbed the silence. No noise entered from outside. *Outside*. Wesson looked round him, forcing his neck to function. It was as he had suspected: there were no windows or, if there were, they were immediately behind him and must have their blinds drawn.

must nave their bunds grawn. He closed his eyes and attempted to assess his position. Firstly, he was a sick man. There was certainly something the matter with his brain, but whether Millbright's diagnosis was the correct one was another matter. Secondly, Eilen Saunders had wanted him to visit Millbright and was herself involved in some plot... His thoughts trailed off as he recalled the visor conversation and the strangely, horribly empty room into which he had walked expecting to see the girl and finding no one. His mind baulked at the memory. He knew those two rooms, knew their layout. There was nowhere a person could hide without being detected and there was no way they could get out without being seen. Logically, then, there could have been no one in the room to start with.

He shook his head abruptly. That wouldn't do. He'd heard the voice quite clearly and also heard the sound of the visor being switched off. What were her words, now? There was nothing I could do about it. I shall have to leave the rest to you. There was nothing she could do about his leaving for his holiday. She'd have to leave the rest to—Millbright? Possibly. At any rate, he hadn't left for Earth as he'd planned to do. But why should anyone want to prevent him leaving Mars or

reaching Earth? What had anyone got to gain from keeping him here?

At the end of half an hour of reasoning and wondering he had come to two definite conclusions. He was sick and needed medical attention; that was one. The second was that since he distrusted Millbright he should seek his medical attention elsewhere. The main problem was, should he tell Millbright that he wanted to go or should he attempt to escape without the doctor's knowledge?

Escape. The word had a melodramatic quality to it.

It implied that he was already a prisoner.

As the effects of the drug had been wearing off he had experimented with moving his limbs about, and by the time he had begun seriously to consider the possibilities of getting out of wherever he was, full feeling and control had returned. He sat up in the bed and looked around. There was no sign of his clothes anywhere in the room and the cotton nightshirt in which he had been dressed was far from adequate for any attempts at escaping.

He got out of the bed and explored the room. The door, as he had suspected, had been locked on the outside. There was no other means of exit that he could see and there was nothing in the room that seemed likely to offer him any possible assistance in

his-he grimaced at the word-escape.

I've got one advantage, though, he thought. They don't know I'm suspicious: they don't know that I

overheard that visor conversation.

There was something else, hidden round a corner of his memory, that he knew would help him if only he could recall it clearly. It had been clear when he had come up out of unconsciousness, and then it had faded out: something about a table. A low table with a man lying supine on top of it. A man on a table. A man...

He sat down on the bed in the silent, amber-lit room and he attempted to clear his mind, to blank out his thoughts so that the hidden memory might return, might swirl in out of the grey limbo and fit one more piece into its place in the jig-saw. But it was no good. His mind wouldn't clear and the thing he wanted wouldn't emerge. He gave up trying at the end of four minutes or so and stood up.

What I've got to do, he told himself, is to get away from here and find a proper doctor. Once I've got my brain trouble cleared up I can investigate Millbright at my leisure and find out just what he's up to. It was simple enough to say, but the problem of making an actual escape was still a very tangible one. It was only when he remembered Millbright's remark about someone bringing him food that he started to formulate a definite plan.

When the man arrived with the food Wesson was back in the bed. He turned sharply as the man entered. "I want to see Dr. Millbright," he said. "It's urgent. Those pains in my head have started again."

He had expected some argument, some comment from the man. Instead he got a look of blank astonishment and then, remarkably, a look of fear. "I'll get the doctor for you," gasped the man, putting the tray of food down swiftly and turning for the door.

Fear again. There had been fear on Eileen Saunders' face, Wesson remembered, when he had told her he was leaving Mars that afternoon. And now here it was

again.

He shook himself free of his thoughts and leapt out of the bed, having heard the footsteps of the other man

fading away outside.

His room, he discovered, faced out onto a short corridor at the end of which was a flight of stairs, leading downwards, and a lift. There were several other doors along the corridor, one of which was open. Swiftly, stepping cautiously and lithely, he pered inside. Darkness, His feeling hand discovered a light switch and he snapped it. Amber lights flared and showed—

A bare room.

I can't stay here, he thought, switching off the light once more. I've got to get out of here before that man comes back with Millbright, but how can I get anywhere in this damned nightshirt?

A frantic examination of the other doors along the corridor showed him that they were all open—and that all the rooms were, like the first one, empty. So far as he could make out the only furniture in that part of the building was contained in the room in which he had awakened.

The lift shaft was empty and there was a plastoid fabric cover over the control studs. The stairs seemed the only means of escape, but if he used *them* he stood the risk of running into Millbright on his way up.

His heart pumped furiously inside him. For a moment he stood at the top of the stairs, looking down into the dark grey gloom below, tense, poised. Then he turned and moved soundlessly back down the corridor and entered one of the empty rooms—the one immediately opposite his own.

He left the door ajar and stood just inside the room, pressed close to the wall in the darkness, the dry rasping taste of fear in his mouth, amazed at the fact that he was now contemplating cold, physical violence and aggression. When Millbright returned and entered the room opposite he himself would emerge from hiding, rabbit-punch the doctor and then slam and lock the door. After that, with his chief adversary out of action and imprisoned, he would try to make his escape. It was, Wesson knew, an irrational course of action to take. He only suspected that Millbright intended to do him no good and was involved in some plot against him. He had no genuine proof to back up his suspicions. A strictly rational man would first ask to leave before deciding to break out by force. But then, thought Wesson, if I were to do that and had my request denied me they'd know I suspected them and I should lose the only advantage I possess-surprise.

He had counted on Millbright returning alone. When he heard the low hushed voices and the steps on the stairs he realised how foolish he had been to bank his hopes on such a chance. He strained his ears to catch the words...

"... I thought it was impossible, sir, so soon after the previous spasm. And that analgesic you gave him..."

"... I thought so too. Still, he's a more primitive type, remember. And the first one, at that. Besides, all the excitement he's been through may have brought it on before time. May even have speeded up the critical period,"

The footsteps came down the corridor. Wesson held his breath. No sense in trying to fight both, he thought wildly. But he might be able to push them inside, lock the door and run.

The footsteps changed their rhythm, slowed. There came the faint creak of a door being pushed open and Wesson lunged.

He was lucky. Milbright entered the room first and the other man was just stepping across the threshold, immediately behind him. Wesson's charge sent him forward with a startled gasp, to crash, arms flailing, into Milbright.

Wesson regained his balance and slammed the door. By the time he had switched on the magno-lock with which the door was equipped, a muffled noise had started up within.

A muffled noise! Wesson grinned when he realised what this implied. The room had been soundproofed. If there was anyone else in the building they wouldn't be able to hear what was going on. He padded off, barefoot and with nighthistif flapping, down the corridor and down the stairs, recalling as he did so the brief conversation he had overheard between Milbiright and his assistant. And one phrase in that conversation had been lodging firmly in his mind throughout the action of the past few seconds—critical period. May even have speeded with the critical period.

And suddenly, presenting itself to his mind clearly and without vagueness, the item he had been trying to remember returned. Critical period. The words were the same, the voice speaking them was the same. But the scene was different. He was lying on a low table, a vast and terrible pain enfolding him in burning arms, Vaguely, through the scarlet translucence of agony, he could see people standing over him. And Millbright's voice was saving: All we've got to do now is keep him safe until after the critical period has passed.

Keep him safe. Critical period. The phrases reverberated in Wesson's mind like echoes of a great bell. Why did they want to keep him safe? Safe from what? And what was this critical period? The thought came to him, fleetingly, that perhaps Millbright had in some way discovered something about his brain trouble and had made up his mind that he and he alone would investigate, diagnose and operate. But somehow that didn't fit. No doctor with any reputation would go about things in that way.

By an effort of will he forced himself to concentrate once more on the problem of getting out of the building. The stairs he was descending led down into a small, bare hallway that was lit, like the rooms above, by amber wall lights. One of the walls was made of one-way glass and through it Wesson could see, pallid beneath the deepening dusk sky, the long, flat distances of the Martian desertlands. Far off, lights glittered in small groups and Wesson knew then that the building he was in was some distance away from Newtown. It was probably out among the mines and the hydroponic plants, he thought, briefly studying the twinkling lights that told of isolated buildings far from the built-up areas.

And that doubled his troubles. How could he get safely away from such a place as this before the alarm was raised?

The front door of the building, he was surprised to find, was not locked. Stepping outside he peered into

the dark distance in an attempt to spot some group of lights or other landmarks that might tell him where he was.

That could be the Marsport Beacon, he thought, studying a part of the horizon where a dull orange glow flowered above a Jagged line of mountains. If it is, then immediately behind this building, twenty odd miles away, should be Newtown. And to my right—the

main road connecting the two centres.

He gazed back into the hallway. Still no sound came from either upstairs or from any of the other rooms leading off the hall. It was possible that Mill-bright and his companion were the sole occupants, but he didn't want to risk taking a chance on that. If he had judged the position of the building correctly there would be a group of factory buildings not more than a mile away along the main road. If he was quick about it he might reach them before anyone caught up with him. Once there he could spin a story and probably get hold of some clothes.

He tucked the ends of the nightshirt up and tied them round his loins. Then he closed the door of the building and started to run, the sand cold against his bare feet and the chill of the Martian night cutting

bitterly through his thin garment.

He found the road without difficulty and, having found it, branched off and ran diagonally away from it for a hundred yards or so, then turned and ran parallel to it. He didn't want to be seen, running in a nightshirt, by anyone at all, let alone any of Millbright's assistants who might by that time be giving chase.

With every jogging, panting step he took he imagined he heard the sound of a turbocar's shrill whine or the angry purr of a pursuing helicopter. But pursuit did not come. The land seemed empty of all life and, as he loped doggedly onwards, he felt that he was the only living thing in a world of silence and cold and darkness.

The factories, when he neared them, took him by surprise. He had been mentally re-living the events of the past fifteen minutes, and the rhythmic, jogging pace at which he was travelling had dulled his perception of realities.

The buildings loomed as darker masses against a dark sky. In front of the first, near the road, a light burned. Wesson made out the watchman's hut, the mesh fence, the arch of the autoscanner that clocked in the employees and clocked them out again. He slowed his pace gradually and started to walk.

When he reached the watchman's hut and the light his legs were more than a little wobbly but he'd got his

breath back.
"Evening," he said, tapping the fence and peering in.

"Anyone at home?"

A grunt came from the hut and a figure emerged: a small thin man with a melancholy, drooping moustache. "Well," said the man, eyeing Wesson, "going to a fancy

dress party?"

Wesson forced a laugh as he scanned the sign above the factory entrance, "Patterson and Sons: Machine Parts." As he had thought, he knew the name. The Martian colonists weren't yet so numerous that the few wealthy employers amongst them didn't all know each other. He smiled pleasantly but authoritatively at the watchman. "Look," he said, "I realise my dress isn't what it might be, but I've had a bit of bad luck and I need help, Your employer, Mr. Noel Patterson, is a friend of mine; I'd be grateful if you'd let me come inside and use your visor.

The watchman peered at him dubiously. "A friend of Mr. Noel's?" he said, blinking, complete incredulity in

his voice.

Wesson nodded quickly, his ears still straining for sounds of pursuit. "That's right," he said.

"Well. I'm not supposed to let anyone in here without a proper pass, unless I know them."

"Look," Wesson sighed. "My name is Wesson, Stewart Wesson, I own the Newtown Central Store. You can verify that by visoring Newtown Information and getting them to show you a tri-di image of me. I know Mr. Noel very well and if you don't let me in and allow me to make a visor call you'll be in trouble tomorrow."

It worked. Three minutes later he was inside the watchman's hut, visoring through to Noel Patterson. Luckily the man was at home. He blinked in astonishment, from the pallid oblong of the visor screen, at Wesson's curious garb.

"Wesson!"

"Exactly, though not dressed as he'd like to be. Patterson, I need a spot of help. I'm visoring from your works..."

"I can see that," nodded Patterson. "What are you doing there?"

Wesson gave a rueful smile. "I've been landed out here without clothes, cash or transport." He flicked his eyes sideways at the watchman, who was standing on his left. "I'll explain how it happened tomorrow, but I wondered whether you could ask your watchman here to fix me up with a suit of overalls or something, and some means of transport back to Newtown,"

Patterson blinked momentarily, then nodded. "Of course," he said. "Anything you say." He turned his eyes towards the watchman. "This gentleman is a friend of mine, Jenkins. See that he gets some clothes and the use of one of the turbotrucks." He turned back to Wesson. "Out of cash as well, eh?"

Wesson nodded. "Until the banks open tomorrow,

yes," he admitted.

"Jenkins, draw whatever Mr. Wesson requires from the emergency expenses safe, but don't enter it in the books until I see you in the morning."

"It's very good of you, Patterson," Wesson smiled.
"I'll explain everything as soon as I see you and re-

imburse you. Thanks a lot."

Patterson nodded, puzzled but polite. "Not at all," he said. "Not at all."

Ten minutes later, dressed in neat grey overalls and with fifty credit notes in his pocket, Wesson was speeding towards Newtown in the borrowed turbotruck beneath the pale light of the first-rising Martian moon. The dashboard clock told him it was nine o'clock. There was still time to contact a doctor he could trust.

And still came no pursuit. . . .

WHEN he reached Newtown, Wesson drove straight to a bank of public visor booths. He wanted to contact someone who really was an expert on the human brain; he wasn't taking any chances.

He dialled Information and waited as the screen cleared.

"Can I help you, sir?" The flat metallic voice of the robot sounded out harshly in the kiosk.

"I want tri-di pictures and brief histories of all the main brain specialists at present living in Newtown and Marsport," Wesson said. "I also want their addresses and visor numbers."

There weren't very many of them and it didn't take him long to decide whose qualifications impressed him most: a Dr. Hood, brain specialist, surgeon and neurologist. Wesson had the robot repeat the picture and the information and he wrote down the man's address and visor number. Then, as an afterthought, he said: "Can you also tell me the address of a Dr. Millbright?"

The screen blanked and remained blank for ten seconds or so while the composite electronic brains of the Information Service sought for the necessary data. When the screen cleared again the robot voice said: "We have no record here of a Dr. Millbright residing anywhere in Newtown or Marsport, nor in any other city on this planet."

Wesson broke the connection and left the booth, the words ringing in his ears. No record of Milbright. It was a stunning thought. Everyone who was born on, or who arrived at Mars, was automatically registered

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with Information; it was one of the few Terrestrial regulations that had been put into operation outside Earth itself. Why, then, was Millbright not known to Information?

He shrugged briefly, tiredly, as he got back into the turbotruck. There was something more important to think about: his own brain. Millbright would have to wait; the essential thing was to see this Dr. Hood as soon as possible. When that was done he could check up on Millbright and partners at his leisure. He would also, he realised, have to find out what had happened to Dick McLeod, though it was almost certain that the man had left for Earth. Somehow he couldn't imagine the little spaceman getting off that rocket once he was aboard.

The fluorescent rainbow streellights and skysigns made multicoloured patterns and meshes of jewelded brightness against the dark buildings and the moonlit sky above. And Wesson drove swifly through the vast network of roads and houses and light-patterns that was night-time Newtown, heading south, his face grim and strained and his mind busy with strange and disturbing thoughts.

Forty-five miles away, at Marsport, the evening mail rocket for Earth boomed out its thunder and rose on its tail of fire, slowly, gathering speed second by second, rising up and up and sending out its roaring message over the land as it scrawied its scarlet flame line on the darkness. By the time it had vanished from view Wesson had pulled up outside the house and surgery of Dr. Hood.

The front door had an electronic roboresponder fitted in its centre and Wesson spoke into the ovoid hollow of its receiver. "Good evening, I'd like to see Dr. Hood."

"Your name, please, and your business with the doctor?"

"My name is Wesson; Stewart Wesson. I'd like Dr. Hood to examine me."

"The doctor's surgery hours are marked on this door, sir," the impersonal voice remarked. "He doesn't usually see patients after eight o'clock."

Wesson said: "This is rather an urgent matter. I'd be very grateful if you could tell the doctor I'm here."

"I will enquire whether the doctor can see you."
There was a slight click, then silence. Wesson knew
that the simple electronic brain that operated the
responder was now conveying his request throughout
the rooms of the house.

The pause lengthened. The cold, raw wind of the Martian night blew against Wesson' sback, blowing its chill breath through his overalls. Then, as he waited, he started once more to wonder what Millbright had wanted with him. What could make any doctor so interested in a man he didn't know?

"Dr. Hood will see you," rasped the roboresponder suddenly, breaking the silence and driving Wesson's wonderings away on the cold night wind. The door swung open. A well-furnished hallway lay beyond and there, plumpish, pink faced and with iron-grey hair, stood Dr. Hood. "Come in, Mr. Wesson, come in," he said.

Once inside the consulting room Wesson came straight to the point. "There is something wrong with me," he said. "Up here." He tapped his head. "I've been getting headaches more and more regularly. Not a normal sort of migraine head, either. Something different."

The doctor nodded, staring at him hard.

Wesson realised that he was looking at his overalls. He moved uncomfortably in his chair. "I was in my workshop," he explained, "and I felt another headache coming on, so I drove straight over here."

"You're the Wesson that owns the Central Store, aren't you?" enquired Hood suddenly, after a pause.

Wesson nodded.

"Seen the papers today?"

"No-no, I haven't, as it happens." What was coming next?

"A man called Stewart Wesson, owner of the Central Store, who was due to catch the five p.m. rocket for Earth yesterday, collapsed in the taxi that was taking him to the spaceport. A passer-by identified him and took him off to a doctor for treatment. It was all in yesterday's evening paper and in this morning's edition." The doctor eased himself out of his chair and stood up. "Now either you are a fraud or else you're really Wesson and running from doctor to doctor. I think you ought to tell me which applies."

Wesson sighed. "It didn't want to tell you about it," he admitted. "It's been rather a crazy business. I really am Wesson and you can verify that by getting on to Information if you doubt my word. I have a hazy recollection of what happened yesterday, and today, a few hours ago, I woke up in some building out between Newtown and Marsport under the tender care of a doctor I'd never heard of and didn't like and who isn't registered with Information. I ran out and looked up the most competent and most accessible brain specialists, chose you and drove straight there." It was cutting the story to its bare details, but to have said more would have cut the chances of the doctor's believing him by half; there were too many things in the whole story that he himself did not understand.

"A doctor not registered with Information!" Dr. Hood was incredulous. "That's not possible, Mr. Wesson. Everyone, from babe in arms to government official, is registered with Information. Even visitors."

Wesson nodded. "That's what I thought," he agreed. "I'can only surmise that this man's name isn't really the name he used when I spoke to him." He leaned forward in his chair. "Look, doctor," he said urgently, "I genuinely need help. The last headache—the one I had yesterday afternoon—cracked me up altogether. I have no reason to think I shan't get more of them. I want to know what's wrong with me and what can I want to know what's wrong with me and what can

be done about it, and I want that information from someone who knows what he's talking about. That's why I came to you."

The flattery had been unconscious, but it worked. Dr. Hood regarded Wesson sombrely for a moment, his eyes puzzled. Then he nodded. "All right," he said, "providing you're Wesson, I'll examine you."

"You can check with Information on that point," Wessen said. "If you're not satisfied with the physical resemblance between the tri-di image and myself you could, as a medical man, ask to see my eye vein arrangement patterns and fingerprints which are on record there."

The doctor grunted. "I'm aware of that," he said caustically, moving towards the visor. Wesson lapsed into silence.

The doctor contented himself with checking on the facial resemblance only. "All right," he said, snapping off the visor and turning round. "You're Wesson. Now come into the other room and we'll see if we can discover what's wrong with you."

They went into the surgery and Hood went on speaking: "It may be nothing structural, of course. Some of these things are brought on by digestive troubles or by ordinary mental fatigue. Do you get sickness with them? Vomiting?"

Wesson shook his head. "Not so far."

"When did they start? How often do you have them?"

"They started about a fortnight ago," Wesson answered, and then went on to describe them and to describe, as best he could, the vast agony of the worst of them—the one that had sent him unconscious the previous afternoon. "When I told you, originally, that I'd felt one coming on today! was just trying to excuse my sudden arrival. Actually I haven't felt any pain since yesterday but I think that other doctor gave me some sort of drug, so that may have had something to do with it."

Hood grunted, then said: "Did this other doctor make any diagnosis?"

"He told me I had a piece of bone pressing on the occipital lobe of the cerebrum. I somehow didn't believe that; I always thought the cerebrum was the bit of the brain in the front, and my pains start 'way

down at the base of my skull near my neck."

Hood was non-committal. "The brain does funny things, sometimes," he nurmured as he motioned Wesson into a chair. "We'll be able to tell whether this fake doctor knew what he was talking about after we've made a few tests." He wheeled a portable X-ray machine across the room, then fetched a similar-looking but slightly smaller machine, fixed it on a mobile tripod and wheeled that across also. "Ever had your brain examined in the past?" he asked casually.

"Never," said Wesson. Then he forced a grin. "Though it's often been suggested to me that I should

do."

Hood smiled and wheeled the first machine across. "It doesn't hurt, I assure you," he said. "All you've got to do is sit still. I want radiographs from all angles."

"What's the other gadget?"

"A combination electron microscope and cathode ray projector. It's used for taking radiographs of special areas of the brain under high magnification." He pressed switches. Tubes glowed and hummed.

Wesson sat very still.

"All the data obtained by these two machines," Hood told him, "is fed simultaneously into an electronic correlator that already has every known fact about the structure and function of the human brain and nervous system at its mechanical fingertips. The correlator is geared to spot any deviation, however slight, from the normal brain." He swung the two machines round to a different angle and went on: "If there's anything structurally wrong with your brain we should soon know about it in detail."

The eyes of the machine glowed brightly, carefully,

intently at Wesson. He felt his heart beating louder and louder as he tried to fight off a strange panic that had descended on him the moment he realised that he was soon to learn what was wrong with him. Supposing he was going insane! Supposing it was already too late to do anything about whatever was wrong, too late to operate! A chilliness grew out of the panic and moved itself inexorably through his limbs like a cold spring bubbling from the ground, spreading, spreading.

The machines were moved. Time passed. Moved again. More seconds, more minutes. Moved again...

and again . . . again . . .

"There," said the doctor, at last, operating switches, rendering his inquisitive, probing, seeing assistants inactive. "We've got all the views we want now. All we've got to do is wait for the correlator to do its stuff. Some of the bigger correlators that they use in the hospitals can get all their integrating, assessing and deducing done in twenty seconds flat, regardless of the intriacay of the problem they're faced with. My little chappie takes a bit longer, though. Cigarette?"
Wesson accepted one gratefully and the two 'men

smoked in silence for perhaps three minutes. To Wesson it seemed nearer three hours. He felt he'd been in the surgery an entire lifetime when suddenly a red light blinked twice on a built-in machine on the far wall. He started to open his mouth, then snapoed it shut.

"Here we go," said Dr. Hood.

The room, to Wesson, seemed suddenly to have gone cold.

From a small speaker near the light a flat voice began

speaking:

"The brain structure and nervous system of this mammal differ from the normal in so many respects that it is impossible for me to classify the brain itself as human. My understanding of the term 'human brain' is based on certain physiological constants; with such constants missing or unrecognisable it is not possible to class the brain as human at all."

Hood gaped, first at the speaker, then at Wesson.

Wesson sat very still in his chair.

The voice went on: "However, I have been supplied with sufficient information to describe how this brain differs from that of a human being. Accordingly I have recorded a detailed account of these differences on paper, together with comparative radiographs and diagrams of the brain I have just examined, and the brain of a human being." The voice ceased. The red light blinked. At waist level, below the speaker, a drawer shot out of the wall containing a sheaf of papers and radiographs.

Hood gathered the material up and shut the drawer. Then he turned and looked at Wesson. His eyes were blank; it was as though he wasn't seeing his patient at all—or seeing him, perhaps, for the first time. "Not

human," he breathed.

The initial shock was over. Wesson stood up and pointed at the papers. "We'd better see just what I

am, then," he said jerkily, "hadn't we?"

The doctor pulled himself together and started examining the findings of the correlator. He flicked through the pages, reading quickly, poring over the diagrams and radiographs. He motioned Wesson to sit down again while he himself paced about the room, muttering. At last he turned and walked back to his chair.

"It thought perhaps the correlator had gone wrong." he said, his voice quiet, yet with a note of urgency within it. "But these radiographs prove that it hadn't. Let me try and explain it to you simply. Wesson: the normal brain is made up of three parts, the first of which is the cerebrum. This makes up something like nine tenths of the normal brain area and is concerned with memory, thought, control of voluntary muscles, emotion and intelligence. It's split into two parts, which we call the cerebral hemispheres. These are situated at the top of the head. Below them comes the cerebellum, which co-ordinates muscular actions. Below that again, just

inside the skull yet actually a part of the spinal cord, comes the medulla oblongata, which controls certain involuntary processes within the body. Here, this diagram will show you." He handed Wesson a sheet of paper.

Wesson blinked at it. Looked up, "Mine isn't like

Hood didn't meet his gaze, but concentrated, instead, on the papers in his lap. "Yours isn't like that, no. Your cerebral hemispheres are, so far as the correlator could tell, perfectly normal. Thus you have normal memory, muscular control and so on."

"And from then on?"

"From then on, Mr. Wesson, your brain structure is non-human. Your cerebellum and medulla are there all right. The point is, though, that they're duplicated, The three top cervicle vertebræ of your backbonethey're in the neck, just below the skull-are small, but they're small because the hollow tube which runs down the centre of the backbone and contains the spinal cord is much wider at the top there, in your neck, than it is on normal people. And it's got to be that wide because these two medullæ of yours extend down into it. Even the shape of your skull is extraordinary; again, it has to be to allow for the dual cerebellum." He passed a diagram across. "That's vour brain and cranial structure. Compare it with the other and you'll see the difference."

Wesson did so, the cold fear still within him. "But what does it all mean?" he demanded finally. "Apart from the pain I get when these headaches come on I feel no different to the normal human being. Surely, if I've got more than my normal allocation of brain I should feel some kind of difference within myself?"

Hood nodded slowly. "You would feel the difference." he agreed, "if all your fantastic brain was working. The point is that all of it isn't working. You are using only the outer cerebellum and the outer medulla:

you are using, in fact, the brain of a normal human being."

Wesson shook his head, bewildered. "Then—then this other brain matter—is it just some useless, freakish growth?" The thought of it made him tremble. A monstrous thing lodged there inside his head. "Can you operate on me?" he almost shouted. "Can you get rid of it?"

Hood looked at him for a long moment, then shook his head. "No," he said slowly. "I wouldn't touch

it. Wesson. I wouldn't touch it."

Wesson half started from his chair. "What!"

"Wait a minute. I haven't told you everything." Hood held up his hand and Wesson sank back again. "This additional brain matter you've got," the doctor went on, "is not the useless encumbrance you imagine. At least, from these radiographs and readings I don't judge it to be. As far as I can make out the pains in your head are the results of an extraordinary physiological flux at present taking place within your skull. Your additional brain matter is moving, Wesson. Moving! The motion is slow but definite. The extra brain is seeking union with the brain you are now using." Wesson sat there, stumed, unable to comprehend.

wesson sat utere, stunned, unable to comprehend. The doctor continued, leaning forward urgently. "Either it's capable of controlling its own movements or else the subconscious part of your own cerebrum is forcing it to move by muscular contraction of some kind. Certain nerve centres are being affected by the movement, anyway, and that's what's causing these agonising headaches you've been getting with such regularity. Just why it's never happened before I can't tell you, but the important thing is that it's happening now."

"And what happens when they—when they come together, these two brain areas?" Wesson asked, his voice now little more than a whisper.

"I don't know. I just don't know. If the extra brain areas have the same functions as those of their corres-

ponding areas in your brain as operating now, you will probably have a far greater control over those parts of the body affected by the normal medulla and cerebellum than any other living person. It may be double the control, triple, quadruple; I can't even guess.

"If, on the other hand, the extra areas function in some different fashion, the combination may result in anything. The possibilities are endless. It will take an intensive study of the nature of the cells to even arrive

at a theory of what it could mean."

So that was what Millbright meant, thought Wesson, when he talked about the 'critical period.' He knew this was happening to me. He knew! The realisation was an almost physical thing. He sat as though paralysed in the cold room while the voice of the brain specialist hummed into his ears like the distant murmuring of bees.

"... essential that we examine the cells thoroughly while the brain area is still moving and before connection is effected. Then, afterwards, we can watch the fusion

and try and find out what areas of the body ..."

"Just a minute." Wesson said. He looked hard at the

doctor and saw that the man's face was bathed in sweat and that his plump body was visibly shaking. Not from fear. No, Wesson thought, not from fear but from excitement. His mind whiteld. Incredible pictures leapt to view. Hood directing operations on the 'only man in the world with two real brains, folks. That's what I said, two real live brains! Ain't that something' Maybe he'll think all his thoughts twice over, ch?"

Wesson shuddered. He saw the electronic eyes blinking at him all over again, saw the vast machines patrolling serenely round him, their tubes humming intently, correlating, integrating, assessing, deducing. A million tubes humming at him. A million hospital beds and operating tables. A million Dr. Hoods with their pink faces bobbing up and down, sweating out their excitement as they threw a million radiographs down at him and pointed as many stubby fingers,

saying this means so-and-so and this here means suchand-such... He stood up, breathing hard. Hood looked at him in surprise. "What's the matter?"

"You say you can't operate, is that right?"

"Of course I can't operate . . ."

"Then thank you very much for your help, doctor.
I'll be going. If you'll send your bill to the Newtown
Bank I'll see that you get your cheque immediately."

"But—but you can't go now. You don't understand, man. You can't understand!"

Wesson shook his head and walked towards the door. "I understand perfectly, Dr. Hood. I'm sorry to disappoint you but I have no intention of being anyone's guinea pig. I have reason to believe that the fusion of my brains will take place quite shortly and I think I can bear whatever pain I have to bear until then. When the fusion takes place—well, we'll leave that until it happens."

Hood rose from his chair swiftly and crossed the room to the visor. "If you won't listen to reason," he said angrily, "then I shall have to use my authority

and get the police . . ."

Wesson was in front of him in two bounds. He caught hold of the plump doctor and jerked him savagely away from the visor. All the fears and the panie that had been within him welled up and, in that brief instant of time, became transformed into violent anger. He shook the man fiercely. "You swine," he shouted. "You just forget about me! You've got no authority to do anything to me and you've no authority to tell the police about me. If you won't operate on me, all right. I'll find someone else who can and will."

He'd hardly finished speaking these words when the doctor kicked out and grazed his shin. His reaction was practically a reflex movement. It took the form of a straight right that sent his erstwhile medico reeling backwards to fall. stunned, on the carpet.

His last action, before leaving the house, was to smash

the main valve of the visor set.

As he drove away in the turbotruck he realised that he had only postponed an inevitable crisis by knocking Hood out. The material contained in the correlator was still there. The doctor would recover consciousness and show it all to the proper authorities and then, eventually, the government would step in and search out this man, this very odd man with his two brains, who was running loose on Mars. And the authorities were very efficient when it came to catching people they wanted. They'd have no difficulty in tracking him down. He was, in fact, as good as done for unless—

Unless he could find someone capable of removing the additional matter that was moving around inside his head. But there was something else he had to do first: he had to discover all he could about Millbright, because Millbright had known about his two brains

before he had himself.

He drove straight to a public visor booth, got through once more to Information. "I want the large scale map of the main road between Newtown and Marsport," he said, "including areas on both sides of the road,"

When it was shown him he was able to pick out the Patterson factorily quite easily and, from that, get the position of the building immediately beyond it and write down its co-ordinates on the intricate grid system of identification. Then he started asking more questions; checking with estate agency records, passenger lists of incoming rockets and so on. And he got his answers The house had been rented three weeks before by a

Inc house had oeen rened three weeks before by a Mr. Richard Lewis, Mr. Lewis had arrived from Earth two days previous to renting the house. Also arriving from Earth on the same day and on the same rocket was—a Miss Elleen Saunders. The tri-dl images checked. The girl was his 'sccretary' and the man, Lewis, was the man who had brought him his food while he had been at Millbright's.

He scanned the images of the other passengers on thr rocket eagerly but without finding anyone who looked like Millbright himself. There were a couple of

faces that he thought he recognised, but he could not be sure. The man Lewis, he noted, was registered as being on Mars 'for pleasure,' while the girl had a work permit entitling her to take up employment if she could find any. That dight' help him much.

He got a directory from the little shelf below the screen and looked up the name Millbright. There were only two in the book, and when he got Information to show him images of them he saw that neither was the

man he wanted. Another blank.

He broke the connection and leaned back against the side of the booth. There's only one thing to do, he thought. I've got to get back to Millbright and force him to tell me what game he's playing and how he knew I had the two brains. I've got a good hold on him: if he's not on the Information Service Register then he's on Mars illegally or else he's working under an assumed name, both of which are chargeable offences according to Martian Colonial law.

But those facts alone, he mused, might not suffice. He ought to equip himself with something more tangible in the way of a persuader. A blaster was indicated.

But he couldn't just go out and buy a blaster. For one thing he didn't have his permit on him, and for another the stores would all be closed at that time of night. Wait a minute, though. What about the blaster at his own office? He'd be able to enter the side door of the building freely since the robolock was still tuned to his voice patterns. And the building was only about three minutes' run from where he now was. He still back the door of the visor booth and stepped out into the night one more, into—pandemonium!

Down the street, screaming its way with a great brassy clatter, came a streamlined, turbo-powered fire engine, bells aclang. Behind it, another. And another. People were running, their feet pounding the pavements. Against the sky, behind a block of buildings, a rosy stain was flickering and spreading.

Fire. A building on fire.

Wesson got into his turbotruck and drove off. To reach his office he had to go past the fire, and somehow it didn't surprise him when he saw that it was Dr. Hood's house that was ablaze. "What happened?" he asked, pulling up and leaning out of the window

One of the men watching the fire turned. "Don't know. Someone said it's a doctor's house and that he had a lot of electronic gadgets in there. The theory is that something blew a fuse. Happened as sudden as you like. Explosion first; then the fire."

Wesson drove away and his body was cold and numb and his brain was racing crazily . . .

Somehow he felt sure that his own visit to Hood had

brought about the explosion and the fire. Somehow he was certain....

IT was not until he pulled up in a side street at the back

IT WAS not until he pulled up in a side street at the back of the store that the thought struck him. Millbright had said: All we've got to do now is keep him safe until after the critical period has passed. Keep him safe! The words had a new meaning, now, in view of what had just happened. Millbright knew all about him and, if he had unknown enemies, might not Millbright know all about them, also?

Memory of the red and glowing sky above the burning house returned, sharply, in a scarlet blaze. How narrowly

he had missed being a part of that inferno!

He got out of the truck and walked back towards the side entrance of the store. The building was very dark. He found the door and told the robot audiolock to open up for him. The audiolock, tuned to his voice, did as it was instructed.

As he went inside the autolights flicked on and the door closed silently behind him. He padded up the stairs, along the first floor passage, heading for his office.

The blaster was in the bottom drawer of his desk, beneath a pile of papers, where he had thought it would be. He had bought it some time back, when there had

been a minor crime wave in Newtown, but had never had occasion to use it.

He felt the cold solidity and the weight of it, peering at its smooth ugliness distrustfully. Then, checking that it was fully charged, he slipped it into the inside pocket of his overalls. It made an uncomfortable lump against his chest. Probably, too, it would be noticeable from a distance. He was about to transfer it to his trouser pocket when the visor buzzed. It was a low, demanding, purring note, like that of some vast jungle carnivore. It was a menacing sound, too.

Wesson reached for the switch and then stopped himself. The outside lines were cut off automatically when the staff left. That meant that the call must be coming through the electronic exchange of the Store itself—from another visor set in the building. He breathed out in a whispering sigh. He was not alone in the store! The thought made him uneasy. Of course someone could be doing late work somewhere but.

But if they had been the autolight would have been on when he came in, and it hadn't been on. Whoever was inside hadn't entered legally, that much was certain. He snapped the toggle across to 'Sound only' and

said: "Hullo."

"Is that Mr. Stewart Wesson?" The voice was muffled and feminine. Disguised. His thoughts went to Eileen Saunders instantly, skirted her, veered off at a tangent—and returned.

"This is Wesson," he said. "Who's that?"

"Turn the lights out and don't leave the building for at least ten minutes," said the voice, without answering his question, without any change in intonation. "I'm telling you this for your own good. Don't move from that room for ten minutes."

The click told him that the conversation was at an

end. The silence that followed was a very deep one.

He stood up and turned from the visor slowly. The cold hardness of the blaster pressed against him, made him aware of it once more.

Don't move from that room for ten minutes! The words remained in his head, clear, insistent.

Either he had to believe that whoever was in the building with him was a genuine friend and concerned with his welfare, and that, therefore, he should do as instructed, or else he must presume that the message was

intended as a trap of some kind,

Supposing, now, he thought to himself, that he himself was in the other person's position and wanted to get rid of someone in the same building. What would be the best way of accomplishing such a thing? Ring them up and tell them, in a disguised voice, to stay where they were? Warn them that you were after them, in fact? Hardly. Unless-his heart thudded-unless you thought that by such a surprise call you could startle them out into the open, relying on their refusal to believe that such sudden and strange advice could be genuine.

He came to a swift decision and snapped the toggle

on the visor once more.

The electronoperator's voice came like the crackling of metal foil in the stillness. "What number do you require, please?" "Someone just made an internal call through to this

office. I want you to reconnect me and tell me the number of the extension." A pause. Wesson strained his ears for any sound that

might warn him of a stranger's approach along the rubbersponge passage outside. None came. "Hullo, caller. There is no reply, now, from the

party who called you just now. The extension is 657."

"Thank you." said Wesson, switching off.

Six-five-seven. He picked up the card that showed the various extension numbers of the departments and offices throughout the store and glanced down it, since he didn't recognise the number off-hand.

It was, he found, the office visor in the top floor of the packing department. And the packing department was in the west wing of the building, the wing that jutted out from the wall through a door in which he himself had just entered. He visualised the position of the department in relation to that of his own office and realised that the light in his window could be seen quite clearly from the main windows on any floor of the west wing. The thought registered. He turned swiftly and clicked off the light switch. If anyone was out to get rid of him finally and for good they could reach him, with a blaster, from the packing department window.

The darkness pressed at him and enclosed him. He moved across the office and once more stood near the visor, but this time he kept back from the window,

peering down through it, slantwise.

There were no lights in the packing department. The west wing was a dark oblong with, above it, a multitude of rainbow twinklings from the distant sky signs on Newtown Main Square.

He shot a glance at the luminous hands of the electric clock. And then looked again. The second hand was not moving. The silence was deeper than it had been

before because—the clock was not ticking.

Cautiously he flipped the visor on. The indicator light did not come on. As a final test he swung his desk lamp on its flexible arm and, thrusting it into a drawer so that its light would be muffled, switched the button. Darkness continued everwhere.

The power fuses, Wesson thought. They've cut off

the power.

If was really that that made up his mind for him, forced him to come to a decision. He crossed quickly to the ante-room, keeping away from the window, and peered out into the corridor beyond. The lights, of course, had gone off there, too. And somewhere in that darkness, perhaps in that passage itself, perhaps on the stairs, perhaps on the floor below or outside, somewhere, anyway, someone was waiting for him or might even, at that precise moment, be making his or her way towards him.

He found that he had drawn the blaster from his

He found that he had drawn the blaster from his

pocket and that his fingers were squeezing on the butt. The muscles of his arm were rigid with the strain of suspense. He thought: If I'm quick, and if whoever's after me isn't too near, I might get out on the passage fire escape and climb up to the roof.

He moved silently and swiftly in the black stillness, across the room, through the doorway, down the

corridor, his blaster steady in his hand.

He'd got his hand on the door handle of the fire escape exit when he heard the sound. It was a very faint sound indeed. Barely audible. Something like the click of a visor set but more like the click of a blaster's safety catch.

He hurled the door open and stepped onto the tiny platform all in one movement. The cold dust winds sung their melancholy songs among the struts of the fire escape as he climbed frantically upwards.

He reached the second floor platform without incident and had started climbing towards the third when it

happened.

He thought, at the instant that he turned his head and saw the thing, that some sixth sense had warned him of danger. But in the fractional part of a second that followed he realised that he had let his eyes, involuntarily, follow the small white blur of a moth as it passed between his face and the ladder he was climbing. This flick of the eyes enabled him to see the thing as it rose up level with his head, about ten feet away on his right hand side.

It was spheroid, about six inches in diameter, and from the hemisphere that faced Wesson there projected a small tube

And it was neither suspended nor supported. Simply it was there.

He ducked. And only just in time.

From the tube, incredibly swiftly, shot a pencil beam of green light that was more than light,

Wesson didn't wait to see what the "light" did to the wall of the building. He fired his blaster even as the

sphere was turning to bring its tube into line with the new position of his head. Fired—and hit!

The sphere became a small sunburst of firework flame. The raw heat rays streamed from it and thundered harshly against Wesson as he started climbing once again, scorching and humming through his body, blinding him to everything but the need for escape and the terrifying implications of what he had seen.

A thing neither suspended nor supported. A weapon floating in mild-air and aiming itself at him. It could mean only one thing, reasoned the tiny part of his mind still capable of reasoning; anti-gravity. And anti-gravity, the scientists said, was, always had been and always would be, an impossibility!

At the third floor platform he stopped climbing just long enough to look downwards and spy out the land. There didn't seem to be any more floating weapons coming for him but there was movement of some kind below. He pressed himself back against the wall of the building and stared down, his blaster clutched firmly in his hand. A shadow moved in the silent side-street far below. It moved outwards from the dark rectangle of a porch and the light from the street lamp shone stonily upon the man who had made it.

Wesson pressed himself still closer to the wall. He can't see me, he thought. He can't see me and, therefore, he thinks I've gone back inside the building.

The man walked to the edge of the pavement, stepped into the road.

Wesson held his blaster tightly.

Another step. Another. The man was looking up. Wesson was very cold, very still. It could be just someone who'd seen the weapon blow up and who'd come out to take a look at what was happening. It could be. On the other hand....

The man was in the centre of the road, walking slowly, easily, still looking up, when the turbocar rounded the corner.

Wesson hadn't heard it approach. Nor, evidently, had the man. It was as though it materialised, suddenly, from nowhere at all, a whining black monster with searchlight eyes, covering the ground between the corner of the block and the casually strolling figure in less time than it takes to blink an eye.

The man was tossed into the air like a rag doll, arms and legs weaving wildly, tossed and dropped and,

finally and irrevocably, squashed.

The turbocar hummed like a black bullet on the empty road and then, turning into an alleyway, was gone. Wesson closed his eyes and ran his tongue around

wesson closed his eyes and rain his tongue around and about inside his dried-up mouth. He let the tension that had built up in his body drain out of him. Then shook himself and peered downwards once more. There was no one in sight. No one, it appeared, had witnessed the accident besides himself,

I mustn't get over-confident, he told himself. That might have been someone after me, and on the other hand it might not. If it wasn't then I'm still very far from safe. And if they've got anti-gravity weapons

I shall be safer inside than out.

He put his hand out for the handle of the fire escape door and then smiled ruefully at his own foolishness. The doors opened from the inside only. There was left him a choice of two evils: ascent to the roof or descent to the ground. He made a compromise. He would go up onto the roof, cross the length of the building and descend again, via another fire escape, into another street. He took a deep breath and started to climb once more.

No matter what extraordinary things have happened to me, he mused as he climbed, I've got to keep one thing in mind and one thing only until I get somewhere safe. And that is that someone wanted me dead and may still want me dead. It wasn't a comforting thought.

He reached the roof safely and his relief came out in a muffled sigh. Above him the stars twinkled their brilliance in the cloudless sky, companioning the moon,

He didn't want to be seen climbing down a fire escape, and for that reason he crossed to where he could look down on another small road. If he was seen by the police, say, he would have some awkward questions to answer even though he did own the building. The question of the body in the road, for example. It would surely only be a short while before someone stumbled on that.

He gripped the railings near the metal ladder and peered over. There didn't seem to be anyone about and he thanked his stars that the store was in the middle of a fairly large commercial area where there were few flats and fewer restaurants and bars. Swinging himself over the side, his blaster now in his pocket, he started down.

Apart from a moment when he had to freeze and be still—when a man, whistling, strolled along the road beneath—he reached the ground without incident.

One objective attained. The next was to get the truth out of Millbright.

He thought it wisest not to return to the parked turbotruck. If anyone had reached him at the store by tailling the truck from Hood's place they'd be keeping an eye on it now. Better to get a drive-yourself from the hire garage. He set out up the road towards the busier streets. Safety in crowds, he thought. They won't use their weapons on me then.

He realised with a start that not since the first sight of the thing, and the terrible panic that followed, had he thought very deeply about what had been used against him. A weapon that either had its own built-in locator and trigger system or else was powered by remote

control and which defied gravity.

Defied gravity! He shuddered at the idea. It was impossible; the scientists said it was impossible. But then there were so many things about the whole affair that were impossible. A man with two brains, for instance. And a girl who could disappear, within a second, from a room with no exit. A man who knew

about the other man's two brains before anyone else did. A fire that broke out in the house of the only other person who knew about the brains....

Wesson forced away the impossibilities and concenrated on the things that he understood. He had to get to Millbright. He had to force Millbright into telling him all he knew about what was going on and why it was going on.

He reached the drive-yourself hire garage, paid over his necessary credits and drove out in a sleek, grey turbocar that was, the man in charge had told him,

"the fastest thing in the place."

He chose the main roads, preferring the comparative safety of crowds to the dark lengths of the smaller side streets, despite the fact that, owing to the traffic, he had to drive more slowly. As he rounded the corner into Second Avènue he began to realise just how weary he really was. He hadn't eaten since the previous afternoon and the excitements and panies of recent hours were beginning to tell on him.

Perhaps it's that, and only that, he thought, that's

making me think I'm being followed,

He turned off into a smaller road, cut through into one of the town's many squares, circled round it and returned, by a different route, to the main road. It didn't do any good. The feeling still persisted.

He started driving faster.

Swiftly, then, on either side of him, the buildings started thinning out. The big bulks of the commercial blocks became fewer and fewer and, eventually, were no more.

The whine of the turbocar became higher in pitch.

His knuckles were white on the wheel.

Houses, now, were speeding past. Houses—then the small bungalows; a constant procession, that, with the great speed, became incredibly transformed into two solid walls of matter unrolling on each side of the hurtling turbocar. And in the distance lay the silvered desert stretches, brightly smooth in their immensity,

bright beneath Phobos and—a recent arrival on this scene—Deimos. The distant mountains clearly sharp in outline, the planet was a jig-saw of ebony and platinum pieces and the sky a cosmic flower bed of diamond star flowers.

Over the land Wesson drove, faster than before, speeding out of the house areas, the bungalow areas, out of the last stragglings and the final outcroppings of Newtown, purring in the sleek grey turbocar upon the long white road that led over the desert lands to Marsport. And the coldness of fear was still within him. Fear of what had already happened and fear of what could happen in the so near future.

I've been lucky so far, he thought, thinking back. Very lucky. Escaping from Hood's place before the explosion, for instance, and just seeing that robo weapon in time to shoot it to bits. And then that turbocar arriving on the scene just in time, again, to run over the man in the street.

But that sort of luck couldn't last for ever.

His knuckles were white as he held the wheel of the car. The Patterson factory, he knew, was about five miles distant. He didn't want to park the turbocar too near it and he didn't want to leave it on the road. The only alternative seemed to be to take it over the desert in a diagonal direction from the road and try and reach some point behind the Millbright house from which he could spy out the land and approach the building without being seen.

There were so many things that didn't add up that he had practically abandoned the idea of reaching conclusions through reasoning. Thus he had forced himself to limit his conscious thinking down to two basics: Millbright knew more about the whole matter than he did; Millbright had to be made to talk.

He slowed down slightly and peered out of the left hand window. The ground was fairly flat, he knew, but there was quite an amount of drain-laying going on in the district and he didn't want to run his turbocar into a ditch.

"Seems all right," he said out loud. Then, casting a quick glance ahead and another into the driving mirror, he took the vehicle over the low concrete curbing and down onto the flat reaches of pallid, moonlit sand.

Instead of taking his originally planned diagonal course he drove in an arc until the factory buildings were perhaps a mile to his right. Somehow he felt less fear, now, than he had done for some time. It seemed that there was some kind of guardian presence with him in the turbocar.

"Imagination," he snapped, aloud, to himself. "And over-confidence, which is quite unwarranted. I'm letting those three bits of good luck get the better of me."

The turbocar hummed on the sand. The moons of Mars shone down. "I'd better pull up somewhere here," Wesson muttered, "if I don't want Millbright's boys to hear the engine." He wondered briefly how long it had taken them to get out of the room in which he had locked them—wondered if, indeed, they had got out.

He was still wondering when he heard, above the hum of his own vehicle, another sound. Or perhaps it was not a sound at all.

It was a trembling, a quivering of the air beside him. A faint heated wind blowing from nowhere to nowhere else; a ripple, a change of texture, a tinkling of soundless bells. Suddenly it occurred and suddenly it ceared. And in the millionth part of a second that followed immediately in the wake of this cessaion Wesson's foot stamped wildly, as though imbued with miraculous life of its own, upon the brake.

The turbocar screamed on the sand, spurting silver

In the brief instant before his head smacked forward into the windscreen Wesson was able to glimpse what was happening outside. He saw the helicopter, that must have been right above him, plummet to earth

like a bullet-riddled bird not fifty yards away. And he saw two familiar bursts of fire in the air just ahead. Two deadly minor suns blooming their final flower in the night.

Roboweapons, he thought wildly. Anti-gravity. Impossible!

His head hit the windscreen.

The hard, sharp pain was momentary: the aftermath was a lullaby darkness singing him to sleep.

AWARENESS and memory returned together, quite suddenly. They took him almost by surprise.

It's as though my entire being were contained in a single, vast eye, he thought. One moment shut tight, seeing nothing, buried deep down in the dark subterrain of unconsciousness. The next moment—the eye opens, sees, comprehends.

He did not move. The memory of what had preceded the crash had returned and had reminded him of his previous peril. A peril that might still exist. A peril that might be very near him now.

He was very still. His head was resting back on a cool, ribbed surface but he was in a sitting position. He kept his eyes shut, knowing that he was still in the turbocar,

His right hand was resting on the seat beside him, near enough to his leg for him to be able to touch his pocket without letting anyone who might be watching him know that he was conscious. He moved the finger tentatively. Ah, he thought, the blaster's still there.

His forehead throbbed and ached where he had banged it against the windscreen, but apart from that he felt no ill effects. He could think clearly and remember clearly. Also...

Remember!

Not only could he recall the things he'd known before but he could also recall something that had previously been hidden. Another scene recaptured from his previous period of unconsciousness: another scene of people gathered over him as he lay out on a table. The scene

was there in his mind, clear, perfect. The face of Millbright peering down at him and the voice of Millbright saying: I don't know. Hard to say. For one of our own people, I'd say three or four days only, but with him it's more difficult. His reactions to the pain are totally different, of course, since he doesn't know what it is,

_ The voice was a hollow bell sound in his head.

For one of our own people, Millbright had said. Did that mean that Millbright himself had two brains? Was he, Wesson, one among many such people? The idea, when it came, shook him out of his self control. He opened his eyes.

Through the windscreen he saw the buckled shape of the helicopter. Its main propellor, he saw, was still

spinning.

I can't have been out for more than a minute, he

thought incredulously. Perhaps even less,

There was more out there, too, besides the crashed 'copter. In the shadow of the wreckage there was-a figure.

He went into action instantly, drawing his blaster and jerking open the door of the turbocar. Within a second he was outside, the weapon steady, aiming . . . "Stand where you are," he called, "or I'll cook you." The words floated in the still air.

He stood very still, waiting, trembling slightly, the

sweat beading up on his brow.

In the shadow of the 'copter the figure was equally still, though for a moment Wesson fancied he saw it shimmer slightly like a reflection in the wind-stirred

surface of a pool.

"Now walk forward," he said. "And walk with your hands up above your head. Walk slowly, too. I can see you clearly from here and I can drop you as easily as I see you." It was a lie but he hoped whoever it was wouldn't guess that. The figure detached itself from the shadow darkness.

It had identity, became a person, a familiar person,

Fileen Saunders

He kept all emotion from his voice. "Well, Miss Saunders," he said tightly, hating the rush of muddled emotions that ran through him like fire winds, hating the tremblings in his limbs and the poundings of his heart. "Well, who'd have thought we'd meet like this, here, at this time of night?"

She stopped walking when she was ten feet away from him. Her hands were above her head and her face was devoid of all expression. "Who'd have thought it?" she agreed. The gold mass of her hair was changed, by the moonlight, to an auroelo of silver.

"You know where we're going?" he enquired.

"Where?"

"Don't play with me. You know as well as I do. We're going to the house rented by Richard Lewis in which the mysterious Dr. Millbright has his practice. Turn round and start walking there. I'll be right behind you all the way, so don't try and run for it.' It was cheap gangster talk, he knew, but it seemed the only way he could talk when he had a blaster in his hand.

She looked at him for a moment, nodded towards the turbocar, then backwards to the wreckage. "There are dead men in the 'copter," she told him. "If that turbocar's found near the wreck you'll be connected with it.

Do you want that to happen?"

He pondered this briefly, then nodded. "All right. We'll drive to Millbright's." He motioned with the blaster. "Get into the car."

She walked meekly past him and got into the seat beside that of the driver. He kept her covered as she did so, then climbed in himself. "If you try anything..." he started.

"I shart try anything. Just let's get away from this place before anyone comes to investigate the crash. There's a garage at Millbright's and the area of land immediately behind the building is pretty solid rock, so the tracks won't be seen."

"A garage!" Wesson exclaimed. "You think I'm going to drive straight up to the place?" He thumbed

the starter and the hum of the engine drowned her reply as he started off.

After a minute or so of driving he said: "Were you in that 'copter that crashed?"

A pause. Then: "Yes."

It was a lie. The impact of such a crash would have knocked her unconscious at the very least. He had already noticed that she looked as cool and neat as ever and not in the slightest bit dishevelled. "Try again," he said, forcing a stern tone into his words.

"I'm sorry, Stew-Mr. Wesson. I can't tell you

anything."

He'd caught the change of word. A warmth bloomed ridiculously inside him. He cursed himself under his breath for being a fool. This girl, he told himself, is mixed up in a plot against me, yet here I am getting adolescent gooseflesh when she calls me — or starts to call me—by my Christian name, Madness.

He risked a long shot. "Why are you all trying to kill me?"

Beside him, in the turbocar, a little gasp sounded.

"We're not," she said.

He didn't say any more. He'd reached the rocky ground she'd told him about and he swung the vehicle round in a semi-circle, bringing it to a halt a hundred yards behind the black shape that was the Millbright house from which, but a matter of a few hours before.

he had fled, barefooted, with terror in his heart.

Something else, now, had replaced that terror:

purpose.

"Out," he said, pointing the blaster at her. Her eyes pleaded with him. "The turbocar," she said.

"You can't leave it here. Drive it into the garage."

"And drive myself into a trap? I'm not that unintelligent, Miss Saunders. If anyone had seen that crash from the road they'd have investigated by now.

And they haven't. I've been keeping my eye on the mirror. Nobody's walked over to the spot we've left." He waved the blaster again. This time she got out.

He made her walk in front of him, quite close but not so close that she could try and make a quick try and grab the weapon. He kept his eyes alert for signs of life in the house ahead and on the pale sands that streday away to right and left. But nothing moved anywhere, at any time.

Perhaps, he thought, the other two haven't managed to get out yet. Surely, if they'd been released and were still in the building, there'd be some lights on somewhere? So far as he could see the entire back half of the place was in darkness.

They walked steadily over the sand, not speaking. The night was cold and clear and the two moons shone down over them until, at last, they entered the long darkness of the building's shadow.

"Round the front," Wesson whispered. "And no tricks."

The front of the house was just the same as when he had left it—the door open, the amber lights burning within.

They went inside, silently.

"No noise, now," Wesson whispered. "Up the stairs." In front of him, walking slowly, she sighed. "There's

no need to be quiet," she said. "We must be the only ones here."
"You mean they got out?" The words were out of his

mouth before he realised it.

She stopped in her tracks, turned and stared at him. "They?" she said blankly. "Got out?"

"Never mind. Start climbing those stairs." His voice was a harsh whisper and the blaster in his hand jabbed forward, prodding her. You've got to be tough, he told himself, or you'll drop the blaster and start making love to her.

They went up the stairs, along the corridor. Everywhere was silent, still. At the end of the corridor he made her stop. He pressed the blaster into the small of her back and put his left hand on the switch of the magno-lock. "The moment I open this door you step straight through," he whispered in her ear.

His hand trembled on the switch. What if they had got out? What if they were in another room, somewhere in the house? What if they were in that room, there, opposite the one he and his captive were about to enter? He snapped the magno-lock and pushed the girl before him through the opening door, stepping quickly after her.

They weren't in some other room. They were there, where he had left them, standing in the middle of the room, obviously surprised by the sudden opening of the

door, astonishment on both their faces.

He slammed the door behind him, still keeping the blaster aimed at the girl. "If any of you move—she dies," he told them. Again the tough talk. And with it, unwanted, the feeling that if they did move he would not be able to trigger his weapon and kill in cold blood at such close range. He fought down the sudden nausea at the thought of death and strove to keep his hand from shaking.

He took a slight step to one side so that he was nearer the girl but could still see the two men. Then he spoke. "I want some questions answered," he said. "And the first is; how did you know I had two brains before I knew mysel? The second is: why are you trying to kill

me?"

He watched them very carefully. He thought he saw Millbright glance quickly at the girl but the glance—if glance there was—was too swift for him to be certain. "Well?" he demanded. "I'm not playing games with

you, you know."

Millbright cleared his throat and smiled the old, easy smile. "Now Mr. Wesson," he said. "You've been very foolish in assuming that we want to kill you. In point of fact the reverse—the complete reverse—is true. We've been trying to make sure that nothing happened to you. Let me explain, Wesson. Your 'two brains' as you call them are not what you may

have come to think. You have a normal brain and a tumorous growth. The growth has caused you, during the past few weeks, to have brief periods of amnesia during which your actions have been, to say the least, peculiar. During one of these periods you ran foul of certain criminal characters who, since then, have been trying to do away with you. I heard about your first period from your secretary and tried to get her to make you visit me. That failed. I couldn't ake you to visit me because the periods were too brief for you to get worried about them. Consequently . . . "

Wesson shook his head. "Wait a minute," he said.

"I've never had any blank periods in my life."

"They were too brief to cause you any great worry, that's the point. When the human mind emerges from brief amnesiae periods it fills in the gap with false memory of what would normally have happened during the lost period. For instance: if your period occurred during..."

Again Wesson interrupted. He didn't believe a word

of what was being said to him. Ordinary criminals didn't use anti-gravity roboweapons for a start. "Listen," he said carefully, thinking wildly and fast. "A lot of things have happened to me that no amnesia periods could explain. People have tried to kill me with weapons that haven't even been invented yet. A prominent specialist examined my brain with an electronic correlator and the results proved that the extra brain areas inside my head are fusing into one. My secretary, Miss Saunders here, vanishes from a room with only one exit-the door I was standing at. You, Dr. Millbright, are not registered as a doctor with the Information Service. In addition to all this I've remembered enough of what happened here, when I was almost, but not quite, unconscious, to see quite clearly that you were aware of the-the fusion that was due to take place in my skull,"

They stared at him, the two men, their eyes wide, their mouths slack. The sight gave Wesson fresh heart. He went on speaking as smoothly as his emotions would

permit, taking a deep plunge into a lie. "And just so that you can't get away with whatever you're trying to get away with, even if you do succeed in killing me, I've made microrecordings of all these various facts, together with others that I haven't told you about, and I've lodged them in a Safety Deposit Box in Newtown and given instructions that they're to be sent to the police in the event of anything happening to me."

The girl half turned towards him. "When did this happen?" she gasped. "When did you make these

recordings?"

He smiled at her. "I got the turbocar from a driveyourself hire garage. They had a micro recorder there and I used it. One of the men there is a friend of mine; he took the records along to Deposit Boxes at the same time that I was driving up this way."

They stared at him wordlessly.

I've got them, he thought triumphantly. Whoever

they are, they can't face the risk of exposure.

He made the corners of his mouth turn down. "I'll give you three," he told them. "I'll count up to three and, if you haven't started talking by that time, your girl friend here will be an unpleasant cinder. And if you're the sort of men who don't care about that let me remind you that I can turn this blaster on you, having killed her, quicker than you can reach me from where you're standing. One..."

Their faces were pale. Wesson watched them carefully. He wanted to lick his lips but felt that the action might

betray him.

Millbright looked at the girl and said: "If he shoots you he'll know part of it and we'll be forced to use the amnesia treatment afterwards. If he shoots us the same thing happens. Also, if what he says is true about this micro recording, we'd do better to get his co-operation."

Wesson had the word "three" forming in his dried-up mouth when the girl nodded briefly and Millbright said: "All right, Wesson. We'll tell you."

He felt a limpness spread up him but knew he couldn't, mustn't, give way to it. He nodded slightly and took a step away from the girl. "Talk, then," he said. "Sit down on the bed, all of you, and talk."

He leaned against the wall as they sat down. He kept the blaster pointed at the girl, but there was a certainty in him, somehow, now, that he wouldn't have to use it. It's that strange certainty, he thought, that's keeping

me on my feet.

"I'll do the talking, if you like, for all of us," said Millbright. When Wesson nodded he continued: "I said just now that killing you was the exact opposite of our aim. That is quite true. Our purpose here is to protect you from those who do want to kill you."

"Did," said Eileen Saunders tonelessly.

Millbright turned to her excitedly. "You mean——?"

She nodded. "All of them."
Wesson waved the blaster. "Give the story to me in

a way I can understand it," he said. "Not in bits."
Millbright nodded. "Very well. As I was telling you,
our intention was to save you from—from your enemies."

"What enemies?"

Millbright looked at him for a second. Appraising him, it seemed. Then he said: "What would you say if I told you that you, Stewart Wesson, owner of the Newtown Central Store upon the planet Mars, were the most important collection of atoms in the Solar System, bar none, at the present time?"

The memory of Hood's frantic excitement flooded back through Wesson's mind. He felt a sudden fear. Had he played right into the hands of the authorities? Was Millbright a government medico out to grab the freakish man with two brains? He managed to answer the man's question with an effort. "I'd say you were mad"?

"Nevertheless, it happens to be true. You have, apparently, already visited a specialist and had your brain areas examined under some sort of electronic correlator. Now surely you are aware that an electronic

device of that nature does not tell lies. Your doctor was quite right; your two medullæ and your dual cerebellum are moving together in preparation for the ultimate fusion. When that happens you will be the most powerful force in this system. We—" he gestured at Eileen Saunders, at the man called Richard Lewis, "we are here to see that that fusion does take place and that you are not killed before the critical period is over."

"Killed!" said Wesson. "But if you're the only other people who know about this fusion why should anyone want to kill me?"

"We were not," Millbright said calmly, "the only people who knew about your extra brain. The people who have been attempting to kill you, today, were also aware of the difference between your brain and that of the ordinary man."

"But they couldn't have known," cried Wesson, the blaster shaking in his hand. "I only knew myself today—this evening. How could these other people or you, for that matter—know that I was different from other me before I did myself? It doesn't make any sense."

"Alter your viewpoint for a moment," Millbright urged. "At the moment you're looking at the problem through the eyes of someone who finds out that they're intimately connected with the puzzle they're trying to analyse. Instead of saying; how can people know about my two brains before I do, say; how can one person know something about another before that person knows it himself?"

"It's still insane," said Wesson, trying to concentrate on the different viewpoint, trying to dissociate himself from the entire affair and look on it as something that was happening to a stranger. "The only way a person could know — something — like — this — about — another ..."

"Yes?" Millbright's eyes were bright, wide, staring.

"... would be," continued Wesson, forcing himself to speak the thoughts that had been inside him for so long, "through some"—he gathered strength—"means that's beyond the comprehension of ordinary people. Clairvoyance, if you like, or something like that."

Millbright smiled. "Not exactly clairvoyance, Wesson, no. But you're right in one respect. We knew about you, as did these other people I was telling you about, through a means of which you and your contemporaries

have no actual knowledge."

The incredible guesses he had made, the fantastic ideas, found form, became tangible. He remembered the anti-gravity weapon that seemed to turn its muzzle towards him of its own accord. He remembered the way the girl, Elien Saunders, had vanished from a room that had but one exit. He took a deep breath. "You're from another world?" he said.

Millbright pursed his lips. "In a way, yes. In a way, no. We're not from another world in space so much as

from another era-in time."

It had to be one of the two. Both ideas had been see-sawing in his mind for some while. "You're from the future?"

Millbright nodded, "We're from the future."

Suddenly it seemed ridiculous to be pointing a blaster at them. Suddenly they were more than people who had been engaged in some plot that concerned him. "And—and how do I fit in?" he asked, the strength ebbing

from his voice.

"You? You are the reason we are here. You are the reason the others were here also. As I said: you are the most valuable creature alive at the present time, the most valuable creature alive at the present time, the most potentially powerful force in the Solar System. Within a very short while the secondary brain matter in your skull will fuse with the brain you are using now."

"But you've come from the future," Wesson stammered

feebly, not understanding at all.

"Exactly. We have come back to this age to ensure

that your brains do fuse and that you consequently become as powerful as I mentioned. We have come back because others decided that you should not be allowed to reach the critical period—the period, in fact, of your real maturity. Don't you see, Wesson'l This double brain of yours in't just a sudden and useless freak occurrence. It has come about by a mutation in the genes of the reproductive cells of one or other of your parents. The fundamental chromosomal change occurring through a mutation is perpetuated through the descendants of the person in whom it occurs. Your double brain, for instance, will be handed down to your children after you mate. And your children will hand it on to their children. The mutated gene produces a dominant and perpetuated strain."

"Then my descendants . . ." Wesson started, getting a vague glimmering, now, a hazy outline of the gigantic

truth.

"Your descendants are prominent, because of their inherent difference, in that chronosection of your future which is our present. Our world contains humans—and non-humans. We—the three of us here—are non-humans. Our world is divided, Wesson. The humans have continued along the path they have been travelling for so many, many centuries: the path of conquest, First it was the conquest of the plants, then of the animals, then of the land and the water and his brothers. Eventually came the conquest of the air and of space itself."

"But what other path could man take?" Wesson wanted to know. "It was conquer or be conquered, wasn't it?"

Millbright smiled. "No," he said softly. "It was

conquer, be conquered-or adapt."

Wesson shook his head wordlessly, uncomprehending. The doctor who came from another age, the man who was, remarkably, not registered with the Information Service, continued speaking: "You," he said to Wesson, 'are the first of this new type of man—the type of man who automatically adapts to a new situation rather than try to conquer it—or be conquered by it. We are descended from you. In the chronosection from which we have come the humans, naturally enough, are still in the majority. They are still intent on conquest, still sending out spaceships, still concerning themselves with political wranglings and still, above all else, convinced that money and power—the words are practically synonymous—are the only criteria by which a man's worth may be measured.

"We-the non-humans-have never agreed with such ideas. Because of our powers we have been able, individually and collectively, to keep ourselves apart from such matters, but now-and by 'now' I mean the chronosection we left-now there is more at stake than our own welfare. A certain group within the framework of the Solarian Government has produced an atomic weapon which, if used, will start a chain reaction throughout Earth. These people demanded complete power throughout the System. If it was given to them they would not use the weapon; if it was not, then they intended to destroy Earth, having made their own plans of escape to the other planets. We, the nonhumans, could have escaped this disaster by using our special powers, but the bulk of humanity-who have been kicked about since time immemorial by their powerlusting rulers and officials-could not. Consequently we decided that we would have to take a hand in the game that we had been so studiously avoiding for so long. Again, because of our abilities, we were able to convince the group I mentioned that we were capable of foiling their plot and also of destroying them. Their reaction to this interference of ours was to make an attempt to destroy us before we even existed."

Wesson blinked. "Destroy you before you existed?"
"They, too, had the secret of time travel, you see.
They intended to return in time to the period at which
the first non-human mutation occurred and, by killing
him before his final maturity period, rid the future of

the entire line of non-humans. It was an even more terrible plan than their first. It would have altered the entire fabric of the past and changed the future to such an extent that in all probability life within the Solar System would have become non-existent within ten centuries from the date to which they returned. That, at any rate, is the opinion of one of the most famous time probability staticians of our chronosection. We had to prevent them from succeeding."

"So you came back in time to do so?"

"We came back in time, ves. And we were lucky. My two friends here went to Earth and I came straight to Mars. We beat our opponents in finding you, you see. I discovered you here and my friends came over by rocket as soon as I'd done so. We found your original secretary and induced in her, by hypnotic means, a sudden desire to return to Earth. Thus she left you without giving notice, and it was then by no means difficult to install Miss Saunders in her place. Our plan was that she should persuade you to visit me here, of your own accord, for an examination. If this had come off we should have been able to keep you safe here-safe from the others, that is-until after the critical period of your brain fusion was over. Your sudden decision to go to Earth for a vacation upset all these ideas, though. Miss Saunders told us you were going, and we concocted a plan whereby the turbotaxi that was taking you to the spaceport would meet with a slight accident in which you would be rendered unconscious and whipped off here immediately. Luckily, however, you really did become unconscious, inside the cab, and we simply had to persuade the driver that we knew you and would see that you reached a doctor quickly. Then you were brought here."

"And I escaped," said Wesson, speaking half to the doctor and half to himself, "I didn't trust you."

"Quite," Millbright nodded. "Unfortunately, just before you got away, we discovered that our opponents had arrived on Mars. discovered your trail and started

after you. Miss Saunders set out to foil their attempts and, if possible, destroy them before they did too much damage here in the past. Even a small alteration in this or any other past chronosection, you see, can drastically alter the future."

Eileen Saunders looked up, nodded and broke in:
"One of the rules of Time Travel stipulates that no one
in the past must be aware that they are being visited
by people from the future. For that reason no implements, weapons and so on, are allowed to be taken
back in time. But this group who tried to kill you
disobeyed the rules; they brought back a locator,
attuned to your own personality aura wibrations, which
enabled them to track you from place to place. And they
brought back the weapons you saw. We, on the other
hand, had only our non-human powers with which to
protect you and defeat them—and those powers could
not be used unless we were certain that no one of this
ase would notice the form they took.

"The locators made it easy for our opponents to find your apartment, since personality vibrations remain and are strongest in places most frequented by their possessors. I caught and killed one of them fixing a roboweapon inside your door. At that time you were still here, unconscious. Later—it must have been after you escaned—I tracked two more down to the factory to use can be a few or when the property of property o

where you borrowed the truck."
"And you killed them, too?"

She nodded. "And I learned there that you'd gone to Newtown and imagined that you'd returned to your apartment—instead of which, I suppose, you'd gone to this doctor's?"

"That's right," Wesson agreed. "The house blew up and caught fire shortly after I left—was that due to

the others, also?"

"It must have been. Their locators would have told them that your vibrations were very strong in that house and presumably they imagined you to be still inside." "From there," said Wesson, recalling his movements dazedly, "I went to the store to get this blaster."

"—Where I had already stationed myself and where I had found one more of the others lying in wait for you. I warned you, on the visor, not to move. But you tried to escape and met with the roboweapon. I had to run the man over to protect you from a second such weapon that he was about to release on you."

"That was you, too, then! And the 'copter---?"

"That also. It contained the last of them."

"But how did you kill them without yourself getting killed?" He was incredulous. His voice wavered as he spoke.

She looked at him solemnly, almost wearily, it seemed. "Because we—the non-humans—are invulnerable," she said.

He didn't immediately take in what she told him. His mind, searching frantically among the incredibilities he had heard, had seized on one particular statement she had made: the others had had a locator device attuned to his personality, yet they brought it from the futurel He stammered out his question.

Millbright, watching him, smiled slightly. "How could they attune a locator to the personality of a long dead man?" he said, repeating the question. "They couldn't, Wesson. The point is that Stewart Wesson, first of the non-humans, is still alive in the chronosection from which we have come, centuries and centuries ahead of your present. Complete adaptability, you see, means—immortality!"

SOMEHOW the term seemed meaningless. "Immortality," he repeated dully.

Millbright nodded. "Think, Wesson, what complete adaptability really means. Think—and tell me."

"It would mean—mean that your mind would have to be capable of adapting to any situation at all and and that it would have to control the body so that that, too, could adapt." He spoke slowly and carefully. Then, when he'd finished, he said: "But that's not possible. It would mean-"

"Complete control of the atomic combinations of the body and mind. Exactly, Wesson. And that control is directed by the additional brain areas, once they have fused with the rest of the brain. The chemical nature of all atoms, remember, is determined by the number of electrons that revolve round the central core, or nucleus. A chemical combination of atoms takes place by the transference or sharing of electrons. Now imagine the fantastic number of chemical changes that could occur in a body if the electrons could be directed into various combinations."

Wesson's mind reeled under the thought. "Amorphism," he said in a half whisper. "The power to change the body at will into any desired thing."

"That's right," said Eileen Saunders. "Now perhaps you can see why the normal humans of the future are so jealous of us. We cannot be affected by anything they say or do if we don't want to be. We can escape them whenever we want. We can become fish, or birds, or insects or plants. We can change ourselves into machines, inanimate objects, mere streams of atmosphere, breaths of wind. And the transformation is instantaneous."

"Then you changed that time when you were visoring from the office—just after I'd left for my apartment?"

She nodded. "I did. I didn't know you were outside. I changed into an atmosphere stream and went out through the ventilator. When you were climbing the ladder, too, I was there with you; I was the moth that fluttered past you and made you notice the roboweapon; I was the car that ran the man over. Again, invisible, I was with you when you were driving up towards this place, and I forced your foot to stamp on the brake before I went out to deal with the helicopter."

"And-and you're invulnerable, you said?"

"Of course. We can change ourselves infinitely more swiftly than any blaster charge can reach us. If you

had used the blaster on me just now I should have been unable to prevent myself from altering my structure so that the charge could pass through me without harming me. The instinct to self-preservation is very strong in us, almost a reflex action, in fact."

"But supposing you hadn't known I had a blaster pointing at you; supposing I'd just fired at you unexpectedly. You couldn't have changed then, surely?"

"Yes I could. There would have been time for me to re-adjust between the moment the first heat radiation touched me and the millionth part of a microsecond following when the beam would have penetrated. We are immune to all weapons and immune, too, to the decay flux of time, since we are able to repair old tissues and cells and destroy all harmful bacteria within our bodies. The body of the normal human being is. for the most part, a non-controlled factory. Vast numbers of involuntary actions take place continuously in the normal person; these actions are not directed from the cerebral hemispheres and, therefore, there is no subjective, intuitive knowledge in the mind that they are taking place. Consequently in a human body any number of things can go wrong without the person knowing it; if the defective organ seriously affects the body then the person gets to know about it, but only through its resultant effect on the entire body. With non-humans there is complete knowledge and complete control of every atom.

Wait a minute, Wesson thought. There's something wrong here. I locked these two men in this room and they were unable to escape. Yet a being with the power to control its atomic structure would be able to pass through a wall, surely, at will. "You could pass through solid matter, then?" he demanded, his voice regaining a little of its strength.

"We could."

Wesson swung the blaster up once more and stared at Millbright and the man, Lewis, who sat beside him.

"Then why didn't you?" he asked. "I locked you in here when I escaped and here you've stayed, knowing that your precious captive was free and probably in danger. That doesn't make much sense, Dr. Milbright. And another thing: how was I able to show you through that doorway so easily if, as Miss Saunders tells me, you're all able to change your structure the moment a force is applied to your bodies?"

The man called Lewis looked at him appraisingly. "intelligent questions, Mr. Wesson," he said quietly. "The answer to the second one is that when you pushed me I instantly registered the fact that the force applied was not great enough to kill me. Unless we are in danger of complete disintegration—which only means the splitting up of succession of the complete of the splitting up of

Wesson nodded his head very slightly.

"Ah." Lewis said, "but that was not the case. When Miss Saunders told you that we brought back only our non-human powers she made a very slight, though unintentional, mistake. We travelled in time, Wesson, and consequently we had to bring our chronobridges with us. Millbright, here, came straight to Mars; Miss Saunders and myself and one other went to Earth. When Millbright contacted us and told us he'd located you we came to Mars by rocket and our companion returned to our own chronosection. But there remained the chronobridge in which Millbright arrived: that was here, on Mars, hidden. When I arrived and rented this house the chronobridge was mowed here."

"What does all this have to do with your being unable to pass through the wall?" Wesson demanded. "Simply this; since we had to protect you from any type of weapon that the others might have brought back with them we had to have somewhere that was completely impregnable in which to keep you safe until your critical period was over. The obvious answer to that problem was, of course, to use the chronobridge itself. This room we are in, Wesson, is the chronobridge: it fits reasonably well into the shell of the real room as you would see if you knew the layout of this floor. While you were in here, before, the walls, floor and ceiling were impregnable to attack of any kind because the thing you thought was an ordinary magno-lock operated a force flow within the structure of the chronobridge. This is not only proof against attacks from outside-whatever form such attacks might takebut is also proof against non-humans. It is the nearest thing to mechanically induced sentience that the scientists of our chronosection have developed. The force flow alters the atomic structure of the elements of which the chronobridge is constructed in such a way that a nonhuman cannot pass through it. Consequently, since there was no one in the building except ourselves when you escaped, and since we were foolish enough both to enter the room without first making sure that you were inside, you were able to imprison us quite easily by simply turning the switch on what you took to be a normal lock."

"Presuming all that you've told me is true," Wesson said, breaking the silence that followed, "what happens

to me now?"

"We shall put you to sleep until the critical period has passed," Milbright told him, taking up the tale. "During that sleep, which, for the first part, will be hypnotic, you will tell us every move you made between the time of your escape from this room and your arrival here, with Miss Saunders, just now. We shall then set out to repair any damage that may have been done. The question of the brain specialist's house exploding is something we cannot after, but the other, little things, we may be able to change."

"The turbocar, for instance," said Eileen Saunders.
"We can replace the car and remove memory of your visit from the man who dealt with you. We shall also have to attend to the watchman at the factory and so on. No one must know that you have been anywhere but inside a private nursing home since yesterday afternoon. The people in your firm, when you return to the office, will—some of them—have memories of visiting you and so on. All this, of course, would not be necessary if our original plans had gone smoothly. But your escaping this evening has made things more complex."

His mind whirled with the enormity of the tasks she was mentioning. "And what happens to me, when this critical period is over and my brains have fused?"

"You will recall nothing more than that you had one of your violent headaches in the turbotaxi that was taking you to the spaceport and that you awakened here, in good hands. You will recall that, after the 'operation,' some of your friends visited you here and that you sent messages to others, telling them that you expected to be out and about again very shortly. A complete memory pattern will be installed to take care of whatever period of time you remain here, isn't that so, doctor "She turned to Millibright for confirmation."

The man smiled and nodded. "Quite so."

"But my brain!" Wesson almost shouted. "What about my brain, after the fusion? Will I be able to change myself at will? Will I know about myself?"

"Not immediately," Millbright replied. "The ability will be there, yes, but you will not know it until you have occasion to use it. Probably that will happen through some slight accident. A cut finger, for example, would bring the new control centres into use by reflex action and the cut would heal. A post hypototic suggestion implanted by us will ensure that something of this nature occurs reasonably soon after your leaving here." The man rubbed his right index finger against the side

of his nose. Then he said: "Tell me, Wesson, what were your reactions when you heard the results of this correlator?"

"It wanted to get away as quickly as I could and find a competent surgeon who would be prepared to operate and remove the extra brain areas," Wesson replied dully, "I came here because I wanted to force the truth out of you as to how you knew about the two brains before I did, It was my intention to find a surgeon immediately after that." He passed a hand wearily across his face. "I suppose there's nothing else for me to do but accept what you've told me. But what will you do when I go out of here?"

"We shall return to our own chronosection, naturally. First of course, we shall have to restore life to the bodies whose personalities and structure we have been duplicating..."

"What!"

"But of course, you didn't know . . .? Well, let me explain. In an era of restrictions and controls it isn't possible to move about freely unless your documents and so on are in order, as you know. To carry out our scheme we had to 'borrow' the personalities of people who were genuinely alive in this era. Thus there is a real Richard Lewis, a real Eileen Saunders and a real Dr. Millbright. The first two bodies are still on Earth, in a state of suspended animation, and the third, in a similar condition, is here on Mars. As soon as our work is over my two assistants will return to Earth by rocket, re-animate the actual bodies of the two people they've been duplicating, and install a memory pattern of a trip to and from Mars that will fit in with everything else. By that time I shall have re-animated the body of Dr. Millbright, and I shall then take this chronobridge to Earth, pick up my two assistants, who will be invisible atmosphere molecules by then, and return with them to our own chronosection."

"Wait a minute," said Wesson, "let me get this straight

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in my mind. When I leave here I shall be under the impression that I've just had a successful brain operation, right?"

"Right."

"I shall then, presumably, continue my life as I would do normally. That is, I shall go through with my plan of taking a holiday on Earth."

Millbright nodded. "That's correct," he said, the easy smile playing about his mouth.

"And since your work will be done, then, Miss Saunders too will return to Earth."

"Yes."

"And Lewis, here?"

"True"

"Supposing we're all on the same rocket?"
"Well, you will have no knowledge of Lewis whatever,

"Well, you will have no knowledge of Lewis whatever. But Miss Saunders, of course, you will recognise, since she's been your secretary."

"Won't I be suspicious of her being on the rocket? Won't I want to know why she isn't at work?"

"There will be a perfectly good reason for her being with you, if she is with you, Wesson. A reason that fits in with everything."

Wesson stood very still, looking at the three of them, the butt of the blaster cold in his hand. And he knew, suddenly, that he believed them, knew that what they had been telling him was true. Once, when Lewis had told him about the function of the lock outside the door, he had wildly thought of attempting another escape, attempting once more to imprison them. But the idea was a momentary and fleeting breath of thought that had no substance and was swiftly gone.

The three pairs of eyes regarded him.

He took a deep breath and walked forward towards them, holding out the blaster, butt first. "All right," he said wearily. "I'm ready for a sleep, anyway." The voices murmured, the three voices.

"Everything has been done?"

"Everything. The false memories implanted, the true memories blanked out where necessary. All the details of Wesson's actions, as recounted to us while he was under hypnosis, have been attended to."

"What of this business of the man Millbright, whose name I took, not being registered with the authorities?"

"That was not our fault. The man himself has been in practice here for two years without license to do so. He is a criminal and will probably be apprehended sooner or later."

"Then everything has been done to preserve the past from alteration?"

"It has"

"Good. Then there only remains the question of Wesson's subconscious desires and intentions that were revealed to us while he was under hypnosis. If, when he leaves, he carries out those intentions can you, Agent 7, ensure that everything goes smoothly when you both reach Earth? Are you certain that you can instal the prepared memory pattern in the real Eileen Saunders and switch yourself with her without Wesson being aware of anything being different?"

"I am certain."

"When did history record them marrying?"

"Two months from now."

"Then I think we can safely say that our mission has been successful."

"I think we can."

They were all very thankful. It was only natural that they should be; they had saved their world.

HE SHOOK hands with the doctor at the door.

Outside it was bright and warm with the morning sun. On the long concrete drive a turbotaxi hummed gently to itself as the driver waited for him.

"Well, Dr. Millbright," he said, exhaling lustily as though to rid himself of the nursing home odours and sounds and sights. "I suppose I must be going. I must say, though, that I've never had such good care before, when I've been ill, as I've had here."

Dr. Millbright gave a small and very modest smile. "I'm very glad to hear it, Mr. Wesson. We always try and make our patients comfortable here. Just as comfortable, in fact, as if they were in the main nursing

home."

"You have another place, then?"

"Oh, good gracious me, yes. This building here is just a sort of long distance annexe. Well, I must be getting back to work. You're going straight to Earth, did you say?"

"Er—not straight away, no. I have to return to my office first. But I shall probably be leaving on the five o'clock rocket—if I can book seats—er—a seat, that is."

"Ah, yes. Well." He shook Wesson's hand once more. A busy man who'd already spent too long away from his work. "Perhaps I'll see you when you return. Socially, this time, of course."

They laughed and Wesson, with a smiling good-bye, turned and got into the waiting turbotaxi. Behind him the door of the nursing home slammed shut.

As he was driven back towards Newtown under the blue summer Martian sky he ran his fingers gingerly over the transparent plastic coating that ran in a strip across his temples just below the hairline. The stuff wasn't really quite transparent; instead it was opaque in just the right parts to obscure the operation scar. Nothing unsightly.

He breathed in, deeply, feeling the taste of the warm desert air on his tongue. Think of it, he said to himself. No more likelihood of the headaches coming back. No more headaches. No more pains.

And there was something else, too, of course. Something that made him want to hum and whistle and shout. She had come to visit him while he'd been recovering. Not once, not twice, but every day after he'd come out of the anæsthetic.

At first it had been Miss Saunders and Mr. Wesson. Then, since he'd insisted that an invalid couldn't bed dignified when lying in a bed, it had changed to Stewartand Filen. Elleen Saunders, He rolled the name round in his mind. It wasn't too great a jump, mentally, to think of Bileen Wesson.

He hummed a little tune,

The buildings of Newtown appeared, the first ones, flitting by on either side, bungalows and little houses, bright in the sunlight.

It's amazing, Wesson thought, sitting at his ease within the swiftly moving turbotaxi, how quickly you can get to know people. Before I went into that nursing home I hardly knew anything about her. Yet now, after these recent meetings, I feel as if I've known her all my life.

It was fantastic, the hour that followed.

There was the arrival at the store, the handshaking, the 'glad-to-see-you-backs' and the 'you've-never-looked-fitter-old-man,' and there was a great backlapping and a noise of hearty voices and a clinking of glasses as someone brought in a bottle and opened it to drink his new health. And there were the questions.

"So you've decided not to take that holiday?"

"Not at all."

"You are taking it?"

"I am, Phillips. I'm taking it today, if I can get a sea on the rocket. I feel I could do with it and I don't see any reason why I shouldn't take it. I'm going to pretend today isn't today at all but is, instead, the day, whenever it was, that I set out for the spaceport and never got there."

And after that, after the people had gone, after the noise had died and the glasses, washed up and clean, had

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been put away, after the last footstep had echoed its last echo....

"Coming with me?" he asked her softly.

She looked up from the desk to which she had returned after politely drinking his health. "Pardon?"

"I asked you if you would come with me. To Earth. Today."

Her mouth opened, her eyes went very wide. "I—I..."

He stared at her and grinned. "How soon can you get packed?"

She stood up. "A-an hour," she told him in a very small voice. "Say an hour and a half."

He walked over to her and took her in his arms, feeling as he did so how extraordinary it was that he should be able to act so forcefully. The thought didn't worry him in the least. He didn't try to fight against it—simply adapted himself to it. It was so much easier.

It was the same when, later in the day, as they sped on the Mars-Ferra rocket through the long midnight of space, he caught his thumb on a rough edge of metal beside his seat. The thought that he had headed the gash instantly and with very little effort by simply thinking it healed did not startle him. He did not tell himself that he had had an hallucination. He did not stand up and shout that he was a worker of miracles. He did not wake the golden haired girl snuggled beside him to tell her about it. He assimilated what had happened and accepted it, smilingly.

After all, he was a very adaptable man.



(5) MARS

ASS, 0.11 of Earth's. Radius, 2,100 miles. Density, 3,96.
Albedo, 15. Rotation period, 24 hrs. 37 mins. Mean distance from Sun, 141.5 million miles. Mean distance from Earth, 49 million miles. Period of revolution, 1.88 years. Orbital velocity, 15 miles per second. Escape velocity, 3.1 miles per second. Gravity, 0.38. Inclination, 19 '51' o'.

More is known about this planet than about any other. For a full account, see *The Planet Mars* by Gérard de Vaucouleurs (Faber and Faber, 10/6). Controversy still exists over many of Mars' features, but astronomers are generally agreed about the

following.

The planet has no large bodies of water such as oceans or lakes, and there is about only one fortieth of the atmospheric water vapour of Earth. Martian atmospheric oxygen would seem to be about one thousands of Earth, but there are clouds of some the control of the control of

made up of ice and snow. They met in the Martian summer and increase in bulk during the winter. The rest of the surface seems to be composed of a bright, brown igneous rock (and its dust) similar to felsite. There are green areas also, but these are probably not made up of plants like those on Earth, though in some regions

there may be Earth-type mosses and lichens,

Mars has two moons, Phobos and Deimos. The first is 5,800 miles away from the planet and is 10 miles in diameter. Deimos is 14,600 miles from Mars and has a diameter of only five miles. For an accurate, fictionised account of the colonisation of Mars. see Sands of Mars by Arthur C. Clarke (Sidgwick and

Jackson, 8/6).

REPULSION FACTOR

by CHARLES ERIC MAINE

Getting along well with someone "just like you" may not be too easy . . .

M BLOCK at Telesonics Inc., was a flat steel and concrete structure set a little to the rear of the main glass-had penetrated the high expensive security fence, it resembled an overgrown pill-box, or perhaps the reinforced, half-sunken control-room of a rocket launching site. Its appearance was out of keeping with the smooth futuristic design of the factory and assembly sheds; it was, in fact, an outbuilding added as an after-thought, constructed to strict specifications issued by the Security Division of the Technological Research Department at Washington. And to complete the picture was the check-point on the main entrance to the block, with its uniformed guards wearing Federal badges in their lapels.

Probably not more than at dozen people in the world knew what was going on inside the thick radiation-proof walls of the block. Doc Macklin and eleven others. At that time teletransition was a word that had not found its way into the spoken language, and to the uninitiated it was meaningless anyway. But to Macklin and his deputy—a sallow-faced, dreary man named Doyle—the equipment in Room 4 of K block made sense, and, more than that, it worked. Teletransition was emerging from the stage of basic research into a practicable process.

There had been difficulties at first, mainly in the threedimensional scanning. Breaking a solid object down into a sequential waveform, like a video signal, called for microsecond accuracy and more. Random noise gener-



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ated by the tubes in the integrator racks played havoc with the synchronising.

The first rats and mice to be placed in the projector disappeared obligingly enough when the three-dimensional scan was started up, but the spongy mees that materialised in the receptor at the other end of the laboratory bore little relation to the original victims of the experiment.

It took eight years to iron out the multitude of technical difficulties that arose once the general principle of tele-transition had been established. Breaking down the atoms of the solid matter to be transmitted, and converting it into a waveform that could be used to modulate a microwave radio carrier, was the biggest problem. Reassembly, or integration, at the receiving end was easier than had been anticipated.

The teletransitor worked, and from that point on it took eight years to make it work properly, so that small animals could be transmitted over distances, to emerge alive and conscious in the cavity of the receptor.

All this had taken place under one of the strictest security blankets in the history of technology. A minimum of personnel were employed in the Block. Macklin, the Director of Research, was the only scientist on the site who really understood the equipment, and appreciated the significance of this new development in electronics.

From rats and mice to humans was a logical and inevitable step. When the equipment had been adapted and modified for its larger freight, it was Doe Macklin himself who stepped into the transparent compartment of the projector, and gave the signal to the scared and apprehensive Doyle to pull the switches. It was all over in three seconds. Macklin simply dissolved, travelled via a radio-frequency carrier over a distance of approximately eight yards to the receptor at the opposite end of the laboratory, and materialised neatly and cleanly—as sound in limb and mind as ever.

At that stage teletransition was a reality-but there was one further development to be investigated-an experiment that wasn't included in the official schedule of work authorised by Washington. Macklin had satisfied himself that the transmission of living matter by radio was possible-but what would happen if there were two receptors functioning at the same time, each tuned to the same carrier frequency?

Duplicating the receptor had been a relatively easy task, It had not been necessary to build a complete second receiver; up to the demodulator stage the one unit served for both integrators. Once the incoming modulation waveform had been separated from the carrier wave, and had been clipped, cleaned and synchronised, it was split into two, amplified, and fed to independent scanning units in two separate receptor compartments standing side by side. Macklin was satisfied that nothing could go wrong, and as before he chose to carry out the experiment on himself.

Doyle was pessimistic. He said: "I don't like it. chief. If anything goes wrong, we're gonna lose the

finest brain in the country."

Macklin smiled a sardonic, bovish, smile that belied his greving hair and forty years of memories, "You worry too much, Doyle. Think of the advantages if it comes off. There'll be two fine brains in the country. And two Macklins will be able to do twice as much research as one."

"Yeah-but what's your wife going to say about that?" "Why should she say anything? One of us will be free

to find another wife."

"But which one?"

Macklin slapped the anxious-eyed Doyle heartily on the back, "Cheer up," he said, "Don't anticipate situations-least of all triangle situations. I'm a scientist -not a moralist."

He climbed thoughtfully into the narrow rectangular

compartment of the projector, and waited while Dovle closed and sealed the door behind him.

Teletransition wasn't a pleasant process. It involved a considerable amount of physical discomfort—almost pain-in the form of a sickening shock that seemed to last for an eternity. There was no sensation of change or movement. The laboratory, visible through the transparent walls of the compartment, merely changed ends-quite suddenly and imperceptibly. There was no consciousness of the actual transition process; the interval between disintegration and re-integration was a timeless blank.

Doyle tapped on the wall of the compartment, peering quizzically in at his superior. Macklin winked solemnly, then gave him the pre-arranged signal with his hand. The other hesitated a moment, shrugged his shoulders in resignation, and crossed to the tiered control panel recessed into the wall. Switches clicked. In an adjoining room giant alternators moaned as they took the load. The lights dipped momentarily at the initial surge of current. Then the faint insistent whistle of the highvoltage circuit could be heard, oscillating at the limit of

Deftly, with confident fingers, Doyle pressed the sequence of buttons that cut-in the power panels, then threw the switch that energised the robot relay bank. After that there was nothing to do but turn round and watch Macklin, standing erect and sober in the confined interior of the projector.

Three minutes went by, while relays clicked intermittently, and thermal-delay strips curved leisurely over to their partner contacts. Then, finally, the circuit preamble was completed, and the main power relay rocketed home with a savage thud, forcing the banks of mercury vapour rectifiers into violet incandescence as current surged through them and into the projector. The room throbbed with unleashed energy.

The projector compartment glowed blue as the air ionised under the impact of the scanning beam.

Doc Macklin was outlined in fire for a second, and then he faded, rapidly and completely, like the traditional phantom of the night.

Doyle waited nervously, fidgeting his feet over the smooth plastic surface of the laboratory flooring. One second—two—three—and it was all over. Cut-outs smacked open, killing the hum of power, restoring the brilliant violet of the mercury vapour diodes to the normal off-load purple. Teletransition was complete.

He walked rapidly down the full length of the room to where the twin receptors stood side-by-side, his eyes anxiously straining to see into the interior of the compartments, fearing the worst. His pessimism soon evaporated. Macklin had made it—and even as Doyle reached the front of the receptors, the two compartment doors swung open, and two tall greying men stepped out.

There was silence in the laboratory for fully half-aminute. Doyle was incapable of speech, while the two Doc Macklins faced each other, smiling triumphantly, inspecting every detail of form, feature and dress. The duplication was perfect; no mirror had ever produced a more perfect likeness.

The two Macklins spoke together—in exact synchronism: "Congratulations, Doc!" And then they both burst into a roar of laughter. "Shake," they said in unison, stepping towards each other with extended hands. They clasped hands, then turned to Doyle. "Well...?"

Doyle said: "I can hardly believe it."

The twin scientists started speaking together again but this time different sentences. They stopped—one a little after the other. The original synchronism was no longer so complete and so perfect. And—curiously enough—ther was a certain unmistakable atmosphere of irritability.

"Let me speak first," suggested one of the Macklins but even before he had finished the other was saying"Be quiet for a moment. There's no sense in talking together."

"Sure," Doyle agreed. "Take it in turn. But tell me first which of you is the real Doc Macklin?"

"I am," said both men together,

The atmosphere of irritability thickened.

"You can't both be," Doyle pointed out. "Look-you talk first"-he pointed to the nearer of the two Macklins.

"It's fairly obvious," said the other, "that physically we are both Macklin. Mentally too-up to the moment of teletransition. After that our brain traces-our memories -diverge. But only one of us can continue as the real Macklin-that is myself, of course. Macklin number two"-he pointed at the other-"is only a duplicate of myself. We shall have to decide what to do with him."

"Think again," said Macklin the second angrily. "I'm the real Macklin. I initiated the experiment. Whya few minutes ago you didn't even exist. Don't start getting smart ideas. . . ."

The atmosphere of irritability had now crystallised into a tense hostility. Looking from one man to the other, Doyle was aware of an unspoken venom-a kind of instinctive abhorrence similar to the blind hatred of a dog for a cat or a cat for a mouse. These two men were enemies-bitter enemies. It wasn't what they had said or done; it was the malignant glitter of their eves and the uncompromising set of their lips.

Doyle said appeasingly: "Look, Doc. Both of you are real enough. You were both integrated from the same original. The only thing you gotta decide is—which of you is going to carry on as Doc Macklin, and what's going to happen to the other one?"

Macklin number one said slowly and menacingly: "There's no deciding to be done. I'm Macklin, and this

other guy will have to be destroyed."

The other Macklin stepped forward threateningly: "You damned infernal image," he roared, "If there's any destroying to be done, I'll do it."

"Yeah? And take over my wife and family and home...."

"You haven't got a wife and family. They're mine. You're just a cheap three-dimensional photograph of me. . . ."

Any kind of scientific veneer had completely evaporated. They were no longer rational men, but two male humans obsessed with a hatred that could end in only one way. Doyle watched, powerless to intervene, conscious of forces that he had never encountered before. Macklin number one walked over to his twin, and struck him hard and viciously across the face with his open hand. There was a momentary pause—as still as the dead centre of a hurricane—and then the two men were at each other's throats. Doyle backed away out of range of flying fists, not knowing what to do.

It was impossible to tell who was who—if, indeed, such a distinction had any meaning. It was Macklin fighting himself—the most perfectly matched fight in all the world—and it should have ended in a draw, but for one thing. Macklin number one was flung heavily against a bench as his opponent lashed out with his knee, and as he fell his fingers closed on the strap of a heavy electronic test-meter—an instrument worth more than three hundred dollars. He waited for a moment, breathing heavily, then lunged upright, clutching the meter desperately.

The other Macklin came at him like a charging bull. The meter curved through the air in a glittering arc, smashing down on the attacker's skull with a dull crunching sound. The second Macklin collapsed without a murmur, the side of his head distorted and crawling with rivulets of crimson blood. The meter lay shattered on the laboratory floor.

It took ten minutes and two cigarettes for the surviving Macklin to regain a balanced and rational state of mind.

body on the floor, calm externally, but still unable to think coherently. Doyle was in a state of suppressed panic, straining his ears for approaching footsteps in the corridor. But "K" Block was silent.

"What happens now?" asked Doyle anxiously. "It's murder, Doc. They'll fry you for it."

"Talk sense," Macklin snapped. "How can I murder

myself?"
"I don't know," Doyle sighed. "But there's the body.
And it's a real body with real blood. If they don't fry

you they'll certainly put you away, Doc."
"Okay—so they'll put me away. For what? I didn't kill a real man. That guy wasn't real. He was a—

conglomeration of synthetic atoms."

"But you gotta convince a jury of that, Doc. And you can't do that without talking about teletransition—and

that's top secret stuff. You're in a spot."
"Okay—so I'm in a spot. Well, what do I do about it?
You're asking all the questions—now answer one for a

Change. What do I do?"

Doyle mopped his brow with his sleeve. "You'd better lie low for a while. Doc. I'll notify the police."

"What do you intend to tell them?"

"What can I tell them? No one will believe there's two Doc Macklins. All I can say is that I came in the laboratory and found you here—dead. There was no sign of your attacker. The police will automatically jump to the conclusion that an enemy agent did the job—that he broke into the laboratory to photograph the equipment, or perhaps sabotage it, and you intercepted him—but got the worst of it."

"Hm—that sounds reasonable," Macklin murmured.
"But what about me? If they think I'm dead—how can I ever make a come-back into electronics?"

"You'll have plenty of time to think about that, Doc. Just lie low for a few weeks. There'll be a thousand

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and one solutions when you settle down to think about them."

Macklin considered this for a moment, then said:
"Maybe you're right, Doyle. I'll do what you say—I'll
disappear for a few weeks. Perhaps I'll take the family
on a vacation . . . somewhere out of the States—maybe
Canada."

"No—I wouldn't do that," said Doyle. "Don't even

go to see your wife. I'll let her know the truth. Just disappear—without delay—now."

"Okay," said Macklin slowly. "Okay. I'll do that."

When Macklin had gone, Doyle waited in the laboratory for about ten minutes, nervously scrutinising the scene of the crime, making sure that no clues remained to suggest the truth of what had occurred to the keen eyes of the police. Then, unable to remain inactive any longer, he hurried down to the main gate and hailed the Security Guard.

"Say-did you see anyone leave the Block recently?" he demanded.

"Sure," the guard replied. "Doc Macklin left about ten minutes back."

"He couldn't have," said Doyle, trying to sound sufficiently agitated. "Macklin's been murdered."

"He's been what?" shouted the guard.

"Murdered. I just found him dead in the laboratory.

That must have been his killer you let out."

"The heck it was. It was Macklin or his double," said the guard. He went into the check point and phoned for a relief. A few minutes later he was walking back to the laboratory alongside Doyle.

And then the story broke. Within half-an-hour a homicide squad from State Police Headquarters arrived, closely followed by a carload of high-ranking F.B.I. officials. Soon the Press got hold of the story, and by the following morning the murder of Doc Macklin was headline news over the whole world. No mention was

made of the work on which he was engaged, and the security angle was played down, but the case created a sensation none-the-less.

The most astonishing aspect of the killing was the fact that the killer had been seen leaving the site—walking quite calmly through the main gates—and the guard had sworn that he was the exact double of Macklin.

The facts added up so far as the police were concerned. Espionage was the motive, and the agent was apparently a man of similar build and physical appearance to the dead Macklin. A little judicious make-up had no doubt made him appear an exact double—sufficiently exact to fool the guard. He had succeeded in entering the laboratory, and had probably found Macklin already there—or perhaps he had been interrupted in his mission.

Nobody except himself and the dead man knew what had happened, but there had been a violent struggle, and Macklin had been brutally killed with a heavy electronic test-meter. The killer had made his escape unquestioned, relying on his similarity to Macklin to get him past the check point.

The F.B.I. took up the trail, and succeeded in tracing the movements of a man answering to Macklin's description—obviously the killer. From the Acme Car Hire Company they tracked him to a town forty miles away, and from there by rail across four states los betroit. There the trail vanished, and it appeared that the killer had crossed into Windsor in Canada. For a week or two there was no further progress, but investigation went on incessantly, and gradually it was realised that the hunted man was still in Detroit. He had been seen by observant civilians in different sectors of the town.

To Doyle, carrying on with his work, but keenly following news of the chase in the papers, this new development was disconcerting. He had overlooked the possibility that the police might trace Macklin's killer by his physical resemblance to the dead man.

resulting in the fantastic situation where Macklin would be arrested for the murder of Macklin.

He felt sick and worried to death, unable to concentrate on his work, and hardly equal to the task of reassuring Doc Macklin's wife that everything was going to be all right.

The climax came one evening while carrying out power dissipation tests on a number of air-cooled tubes employed in the teletransition equipment. Above the hum of the generators in the adjoining room came the sound of footsteps running down the corridor. He spun round in his chair, heart momentarily pounding with fear. The door crashed open, and Macklin himself came in—looking thin, ashen and breathless.

"Listen to me, Doyle," he gasped. "And don't argue. There isn't time. I've knocked out the guard on the check-point, but he may be discovered at any moment." Macklin flung off his overcoat, and crossed to the

Mackin flung off his overcoat, and crossed to the teletransitor control panel. "This still working okay?" he demanded.

"Why-yes, Doc," Doyle replied, still dazed and uncomprehending.

"Good," murmured Macklin. "I'm going to use it. I'm going to duplicate myself again."

"You're what?" yelled Doyle in astonishment.

"It's the only thing I can do," Macklin explained.
"The police are hot on my trail. They'd have had me
this morning—but I managed to give them the slip and
got away. They've got to have someone to arrest,
Doyle, and it's got to be me. So I'll supply them with
a victim. I'll duplicate myself again, Doyle. Then one
of me will return to Detroit to be picked up by the
police, and the other will make a real getaway."

Doyle didn't argue. In fact, he was incapable of argument. The concept failed to register fully in his mind—it had meaning, but not significance. Like an automaton he switched on the main power panels and adjusted the heater currents of the mercury vapour

diodes. Blankly he went through the routine, preparing the projector and the two receptors for their task. Macklin waited impatiently, striding up and down the laboratory, smoking one cigarette after another.

Finally preparations were complete. Once again the doctor stepped into the compartment of the projector, pulling the door behind him. Doyle pressed the switches and buttons on the control unit, then waited for lights to dip as the projector sucked power from the generators. It happened—smoothly, with precision—exactly as before. Hurrying down to the other end of the laboratory when the transmission was completed, Doyle once again saw two Doc Macklins step from the receptors. "For Pete's sake, Doc," he urged, looking from one to the other, "get things organised now, and don't start an argument." As he spoke he had a horrible feeling that the hostility and irritability was already materialising around the two men like a poisonous mist.

"Sure," said the nearer of the Macklins. "The plan is quite simple. I'm going to New York, and from there to Europe. This other Macklin will return to Detroit and take the rap as planned."

"Not so fast," said the other Macklin dangerously. "I'm the one who's going to Europe, and you're going to Detroit. Remember?"

to Detroit. Remember?"

The venom was there again—just as before. Doyle watched in a kind of mental paralysis as the situation developed towards its inevitable climax.

"Look," said Macklin number one. "No more argument. One of us has got to take the rap. That's why we arranged this second teletransition."

"Sure," number two agreed. "One of us is going to take the rap—but not me. A fine fool I'd be to let myself fry while you go to Europe with my wife..."

"My wife," snapped the other.

Doyle said: "What does it matter who fries? You're both the same person."

Both of the Macklins laughed together. "We were but not any more." Then number one added: "Doyle... there's a bottle of chloroform in the pathological test lab. Get it for me."

"Why you malicious..." snarled the other Macklin, stepping forward, but number one interrupted: "Hurry up, Doyle. Get that chloroform!"

As Doyle rushed out of the laboratory and down the corridor, he heard the sound he dreaded most—a muffled cry followed by a subdued scuffling noise. The fight was on—for the second time in the history of "K" Block. He raced madly into the pathology test lab, hastily grabbed the chloroform bottle, and returned to the laboratory as quickly as he could, his mind filled with a vague wild idea of applying the anæsthetic to both men, then calling in the police. But he was too late.

One of the Macklins stood over the prostrate body of the other, a long steel retort stand clenched tightly in one hand. The inert Macklin was dead—his skull crushed and crimson with oozing blood. Doyle groaned, and dumped the bottle of chloroform on the bench.

"I couldn't help it," said Macklin quietly. "Something came over me—a kind of insane fury."

"I know," Doyle said mournfully. "It was the same last time. You two guys just hate each other."

"There's something I must have overlooked," Macklin continued. "The duplication works all right. It's perfect. But there's a psychological change—a kind of repulsion. There—there is an irresistible urge to kill—to destroy the image."

"Sure," Doyle agreed. "The repulsion factor. It amounts to murder whatever you call it."

"The repulsion factor," Macklin repeated thoughtfully. "That's about it. Like poles repel—that's a fundamental law of electronics. And when you duplicate an atomic and molecular pattern—such as a human being—the repulsion sets in automatically."

"Yeah-but what are you going to do now?" demanded Dovle, "You're in a worse spot than ever, Doc."

"There's only one thing I can do." Macklin regarded his assistant with cold sober eyes. "I've got to repeat the duplication."

Doyle's eyes popped wide open, "What?"

"I've got to go through the teletransition process again."

"But why?"

"Because the police will still want a scapegoat. Half of me's still got to take the rap. But this time only one of us will come out of the receptor conscious. I want you to help me, Doyle. As soon as I materialise in this left hand receptor, open the door and chloroform me. Make no mistake about it. I want an unconscious Doc Macklin to be left behind in the lab while the other Macklin makes a getaway."

"Sure-that's brilliant," Doyle observed. "That makes sense. I put one of the Docs out, then call the police. But what about this body-the one you just

killed?"

"I've thought of a way to get rid of it," Macklin said. "If only I'd thought of it the first time, I would never have been in this spot. And it's so damned obvious too."

"I don't see," said Doyle.
"You will. After the teletransition is over, and I've gotten clear away, all you have to do is load the dead man into the projector, and put him through the teletransition process-but this time with the receptors switched off. Now do you see?"

"Yeah-I see," Doyle said in amazement. "I transmit him-but don't receive him. He just disappears-in the

form of a radio wave."

"You've got it," said Macklin triumphantly. "After that the rest is easy. You call the police and hand over the doped Macklin." "I thought he was supposed to go back to Detroit?"

"That was the idea—but I can't see it working out that way. He'll want to make a getaway too, if he has the chance. No—call in the police, Doyle. That's the safest course of action. Explanations can come later."

"Okay," agreed Doyle.

"And now, without further delay-teletransition number three," Macklin announced, striding to the other end of the laboratory where the teletransitor control panel and projector was located.

Doyle had already pressed the buttons that set the relay bank in motion when the laboratory door crashed open. The uniformed figure of a security guard burried in. He pulled up abruptly as he caught sight of the body lying on the floor, then glancing up, saw Doyle at the control panel.

"Hey you, Doyle," he shouted. "Come down here."
"I can't." Doyle replied, anxiously listening to the

clicking of the relays.

The guard stooped down and inspected the body, scrutinising the blood-smeared face, then suddenly leaped to his feet with an oath.

"Macklin!" he yelled excitedly. "It's Doc Macklin. He's been murdered again!"

The incongruity of his words struck him immediately. Macklin was already dead—in which case this must be the killer—the same guy who attacked him at the check point a few minutes previously. And now he was dead... but how? And by whose hand?

The guard looked at Doyle again with cautious respect in his eyes. "I wanna talk to you, Doyle," he announced, walking across the laboratory towards the projector.

Doyle waved him back—fear mounting within him. "Keep back," he cried. "There's an experiment in progress."

"Oh yeah?" said the guard sceptically—and then he caught sight of Doc Macklin standing motionless in the projector. For a second or two his face was a study in consternation. But he was a man trained to action, and he didn't waste time collecting his thoughts. Ignoring Doyle's urgent protests, he leaped to the door of the projector and whipped it open. Macklin stared at him, his mind full of confusion, not knowing what to do.

"Are you Doc Macklin?" demanded the guard.

Without thinking Macklin shook his head, "No," he shouted. "And get the hell out of here." He leaned forward to close the door, but the guard heaved himself into the confined space of the projector, holding him tightly by the wrists.

"If you're not Macklin then you must be his killer." said the guard grimly. The doctor struggled to push his assailant out of the projector, but the guard was heavy and tough. He forced Macklin back against the plastic wall. "You're the guy who slugged me at the check point," he stated fiercely. "I'm gonna arrest you here and now."

At this moment Doyle intervened. Events were moving so swiftly that he was unable to think coherently. First the return of Doc Macklin, followed by the second duplication and the second murder, and now the third duplication with the unforeseen arrival of the security guard. He couldn't begin to guess what the immediate future would bring. His head was filled with the clicking of the relays in the control unit: he was obsessed with the frantic realisation that there were only a few seconds to go, and that there were two men in the projector.

It was too late to stop the teletransition, so he did the only other thing possible—he slammed the projector door behind the guard, sealing both men in the cramped space of the compartment.

Almost immediately the power relay thumped into circuit, and the dynamos took up the theme as the three-dimensional scan came into operation. Doyle stared

in horrific fascination as the two figures in the projector faded—then he raced to the opposite end of the laboratory—to the twin receptors. No sooner had he arrived than both doors swept open simultaneously, and two Macklins—each struggling with a security guard—staggered out.

There were four men to cope with now—not counting the dead Macklin on the floor... two new Macklins and two security guards.

There was a furious struggle going on. The guard or guards—were too intent on the fight to realise what had happened. There was no time to pause and reflect: Macklin was desperate—both of him—but the guards were determined to get their men. Doyle stood watching in blank desperation as the drama unfolded itself, unable to think and unable to act.

Suddenly a revolver dropped to the floor from the holster of one of the guards, and lay tantalisingly close to the weaving feet of the four men. Doyle stared at I, fascinated. It was the key to the whole situation. Stealthily he crept forward and picked it up, weighing it carefully in his hand. Then he snapped—"All right, you men. Stop fighting. Stop it—now!"

His words were ignored. The mounting tension in his brain reached snapping point. "Stop it," he roared, his finger tightening on the trigger.

One of the Macklins disentangled himself from the scrum and lunged at him. Doyle fired instinctively, then fired again and again at the remaining men in blind panic. He kept squeezing the trigger until all the chambers were empty, and the hammer merely clicked hollowly. Only then did he recover his senses.

The two Doc Macklins lay on the floor—as dead as the other Macklin near the laboratory door. One of the guards was dead too, sprawled awkwardly against the side of one of the receptors. The remaining guard was still on his feet, but bleeding from a graze above the

temple. He looked narrowly at Doyle, blinked and came slowly towards him.

Doyle took a deep breath and reversed his revolver; then, as the guard came within range, brought the weapon violently down on his head. The guard stumbled, spread out his arms helplessly, then subsided with a groan.

Slowly Doyle surveyed the scene—four dead men, and a fifth knocked insensible. He stood there, white-faced and dazed, holding the revolver by its hot barrel....

Whichever way you looked at it—it was an impossible situation. To have killed three men—one of them a security guard—was bad enough, but to have another guard unconscious at your feet, ready to recover and make an arrest at any moment, was even worse. Doe Macklin was dead now—dead beyond recall—in spite of teletransition and multiple duplication.

There were tifree Macklins on the floor, and one guard who was also dead. Doyle eyed them thoughtfully, debating the problem. The first task was obviously to destroy the evidence, which meant getting rid of the bodies, and Macklin had, ironically enough, already indicated a way. Teletransition without reception—the perfect method of disintegration.

Doyle wasted no time. The revolver shots may have been heard outside "K" Block, and at any moment further guards might be arriving on the scene. Hurriedly and breathlessly he dragged the bodies to the remote end of the laboratory, then crammed two of them into the projector. Switches clicked systematically under his nervous fingers, and the relays commenced to tick. He almost forgot to break the receptor circuit, and experienced spinal chills as he visualised the possibility of four corpses materialising in the twin receptors.

But in spite of his mental agitation, he missed nothing. The teletransition went off without a hitch, and the two bodies vanished without trace.

A minute or two later he loaded the second and final

eargo of dead men into the projector compartment, and set the equipment functioning once more. As the bodies faded under the scanning beam he breathed a deep sigh of relief and relaxed physically and mentally. The most urgent part of the operation was completed, and now the only remaining problem was—what to do about the unconscious guard?

He walked down to the receptor end of the laboratory and inspected the prostrate guard, who was still unconscious, and looked as though he might stay that way for several minutes more. When he awoke he would undoubtedly remember all that had happened: the first dead Macklin, and the triple killing by Doyle himself. There would be a lot of explaining to do—explaining that might not convince a jury of his own innocent, or reasonably innocent, part in the business. Doyle could appreciate quite clearly that he himself would be number one target for every cop and every G-man in the country... unless....

Unless he followed Macklin's example, and used the teletransition equipment to provide Uncle Sam with a scapegoat. He could split himself into two—amoeba-like—and let one Doyle answer all the questions while the other one went into retirement—incognito.

It was an attractive solution, just as it had been to Macklin, but he had to allow for one vital snag—the repulsion factor.

He had to ensure that there would be no argument with his electronic double after they had stepped out of the receptors, and no further homicide.

His eyes fell on the bottle of chloroform still standing on the bench where he placed it, and instinctively his hand reached for his pocket, where the empty revolver lay. Two weapons—an ansathetic and a club—would provide a reliable answer to the problem of the repulsion factor if they were placed in one of the receptors before the transition took place. One of the duplicate Doyles would be armed, and the other unarmed. It should be

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a relatively simple matter for the former to render the latter unconscious, then handcuff him to the inert guard, and make his escape. There would be no manhunt—and no further worries or problems.

Yes—that was the solution: one more final duplication, and he was free. As a final gesture, and to cover his tracks, he would wreck the teletransition apparatus—a move which might delay the discovery of the truth for some time, perhaps long enough to ensure an effective getaway.

With a final glance at the guard, Doyle returned to the top end of the laboratory, and went through the preamble of resetting the release. Penively, with a gueer unsettled feeling at the pit of his stomach, he pressed the final switches, waited for the relays to start clicking, then stepped into the projector, pulling the door shut after him. Three minutes to go—three awful minutes of waiting for the violent shock of his first teletrasition. Why worry? Macklin had been through it three times before, and the guard once—and they had survived.

He didn't hear the power relay thump home, but he saw the sudden flash of the mercury vapour tubes—and in that instant, as his mind dissolved under the paralysing shock of the transition scan, he remembered something—the most horrific fact of his life. . . .

He had forgotten to switch on the receptors . . .!

BEYOND THE BARRIERS

by JON J. DEEGAN

Even barriers have to move with the times!

Tr was soon after five o'clock in the evening when the noise first became noticeable. Not that this hour marked its beginning, because several brief manifestations beforehand had passed unnoticed in the general concentration upon life's daily activities. Not until the shrill, monotonous cheeping began to sound more frequently and mysteriously did people remember how they had unconsciously noted earlier unaccountable signals.

Yet before public bafflement crystallised into making the occurrence an issue, Klandar, Vizier of Empyrean, called an emergency meeting of the Council of Elders.

"Hear, all present!" he declaimed. "We meet today in striet secreey, and none shall speak outside of what transpires. For unknown perils are upon us—perils as yet unrecognised by our people but which I reval to you now in order that measures may be taken for the defence of our realm." His form seemed to droop pessimistically, and his tone was burdened with sorrow. "What these measures may be we cannot guess at the moment. And strangely enough the gravity of our present situation lies in the fact that it is not new—it has happened before!"

All the counsellors gasped, with the exception of one veteran who looked down his nose and nodded wisely.

A plump, rather supercilious member said: "Surely, if the problem was surmounted in the past it can be surmounted again. That is elementary, is it not?" He gazed around, seeking applause. He received none. Everybody else realised instinctively that further revelations lay ahead.

"We possess no records of that previous occasion," continued Klandar. "From word of mouth passed along the generations we know that the noise then in no way resembled its present form. There were thunderous crashings and splinterings—so enormous and shocking, coming upon people without warning, that many died from sheer concussion—"

"Aye!" The old statesman had struggled to his feet, waving a skinny forefinger and blinking rheumy eyes. "Thus it has come to me from members of my own family. I am aged and failing now, yet it was as a mer child that I heard the tale from my grandfather. And he heard it, also as a child, from his grandfather, and so through the centuries. Yet they were not helpless in those days!" He commenced to shake his fait nagitation. "They did not sit around wailing 'Woe! Woe! They were strong men then—men of action—"

"Quite," said Klandar, soothingly. "We, too, shall be men of action, once we determine in which direction our activity can best be concentrated."

"The barriers!" croaked the ancient one. "They built the barriers for protection! It is they whom we have to thank for our long years of peace and security. They were men, I tell you—men of action!"

He sank back exhausted, for which the Vizier was secretly thankful. Under cover of the resultant murmur of astonished understanding he marshalled a new series of facts.

"Exactly," said Klandar, "The barriers have existed through the centuries against this very menae. Presumably they have served their purpose well, for we have no records nowadays of citizens perishing from the impact of vibrations. Yet these uncanny sounds which have recently begun to be heard everywhere may possess sinister qualities—perhaps they even penetrate the barriers."

"No!" shrieked the old man. "Blasphemy! The barriers are not at fault!" He foamed slightly at the

corners of his trembling mouth and flailed his feeble limbs so violently that neighbours restrained him.

"I hope not," said Klandar, grimly. "But if the noises do not travel through the barriers-whence do they come? From outer space?"

Nobody could provide an answer, except the ancient counsellor. "Call the physicist. He ought to know. Action-that's what we need! Get something donedon't just sit around moaning. Be men—like your forefathers—"

Klandar shrugged and despatched a messenger for the tall, haggard-looking physicist, who already waited nearby.

"I am Torg," announced the man of science. "What is it you wish of me?" The question merely phrased the polite formula for official occasions. Everybody including Torg himself-knew what was required.

"From what direction come the mysterious noises?" inquired Klandar, with equal formality.

"That we cannot know until they occur again. We remain alert for their repetition-

As though in deliberate mockery, the air became filled for three full seconds with high-pitched, staccato shrieks.

"It is louder," said one counsellor, thoughtfully, "Louder and more intense."

Klandar turned expectantly to the physicist. "Well?" Torg shrugged. "The manifestation was too brief. Personally I had not time in which to concentrate upon the direction. Perhaps my staff seized the opportunity." There was a brief, horrible, pause.

"Could it be-an enemy?" asked Klandar, putting into words a thought that other members of the assembly hesitated to voice.

"At the moment," admitted Torg, frankly, "I do not know."

"If so," remarked a counsellor, ominously, "it con-

situtes a threat to our entire community. It means that the enemy has actually found a way to defeat the barriers. Perhaps he has been desperately working towards that very end ever since our forefathers instituted them for our protection so long ago. Now, while we have remained idle and complacent, this unknown antagonist has advanced beyond our outdated science."

"Blasphemy!" screeched the ancient one, "How dare you openly impugn the abilities of our revered ancestors?" He started to foam at the mouth again. Three attendants helped him, tottering, to the exit, much to everybody's relief.

"We must allow our scientific staff opportunity to investigate," announced Klandar, finally. "I declare this assembly adjourned until the same hour tomorrow."

The noises generously provided ample opportunity for the scientific staff. During succeeding periods they intensified both in volume and frequency. The horrible, staccato whining multiplied itself into sour, discordant tumult. Citizens desperately plugged their ears, only to find escape impossible. The noise pervaded their very beings. Ragged nerve centres soon demanded relief. Sleep deserted the city and a hundred thousand eyes stared helplessly into caterwauling gloom through the long, leaden hours.

The council's deliberations proved difficult. The constant twittering whistles were as annoying as invisible mosquitoes. The situation was in no wise made easier by growing enmity directed against scientists from officials and general public alike.

"Something must be done," thundered Klandar.
"Surely you are not still completely baffled? Do thèse
noises come through the barriers or not? I will give you
twelve hours longer to find out. Twelve hours only—do
you hear?"

Desperately, Torg readjusted his direction-finding plane. All the time rough sandpaper might have been scraping at raw, exposed nerve-endings.

"Steady," said his colleague. "No use getting flustered." Torg shot him a baleful glance. "You'd get flustered if you had to face the Grand Council. What can I possibly tell them?"

"The row really does come through the barriers, doesn't it?"

"Of course it does! But how can we prove it?" His cheeks seemed more hollow and sunken; his thin shoulders drooped more than ever. "Worst of all, what can we suggest to stop it?" He clamped hands to aching ears and slowly swayed his head to and fro.

"Try again," said his friend, comfortingly.

The direction-finding plane moved deliberately to meet the harsh, jarring cacophony which welled from all quarters. Slowly it swung through an arc of nearly ninety degrees, hesitated and moved back a little. No, there was no clue on that bearing.

Torg sighed. "If only we could perceive some variation—not necessarily in direction, perhaps. Maybe in volume——"

"It seems to get louder all the time, but I thought it was worse after nightfall."

Torg straightened himself and stared, hope dawning in his tired eyes. "So did I," he admitted, softly. "Yet I couldn't be sure. Now I know the noise doesn't come from the sun ..."

"The sun? But-but-"

"Yes, yes—far-fetched, of course. When anybody's at their wit's-end, though—as I am—any theory's good enough to grab at."

There was a brief silence—at least inasmuch as conversation ceased. The shrill, ululating sounds went on as before.

"From beyond the sun, then," suggested the other. "Maybe in the day-time the sun's bulk shields us in some way, but at night——"

"Who's being far-fetched now? That wouldn't make

any difference, because the earth and sun move only relatively slowly in relation to one another. But the earth's daily rotation brings in another factor—that we, living in these parts, might be protected by the planet's mass during night hours. Yet only if the noises issued from the sun. Since they apparently become intensified when darkness falls, that cannot be the case. Therefore, we must fear the worst."

His friend gulped. "An-an enemy."

"I can imagine many dreadful weapons of war" said Torg, grimly, "but none worse than this. How long are people likely to last? They cannot concentrate, they cannot sleep. Soon we shall know madness—the weaker vessels first, then the stronger. All determination to resist will vanish; men will seek only respite from unendurable torment. For such a blessing they will be ready to sell their loved ones, betray their birthright anything." He averted his eyes, half-ashmed, knowing that he, too, might be among those driven to such degradation. "Then the enemy will come, sweeping unopposed across our realm—welcomed, even, if he can give us the blessing of silence."

The other tried to change the subject. "But how do these sounds penetrate the barriers? And why can't they be subdued afterwards?"

Torg shrugged. "What is sound? Vibrations in a medium. As simple as that. And because it is so simply induced and projected, the phenomenon, as we know at this very moment, cannot be shut out."

this very moment, cannot be shut out."

They listened deliberately for a time to the cacophony of mixed wailing noises, which previously they had attempted to ignore by concentrating upon their problem.

"You notice what these devilish creatures are doing," said Torg. "The wave-forms are growing uider and more complex. They are running almost the entire gamut of the vibration scale in an attempt to find weakest points in the barriers."

His friend grunted. "Judging by vibrations which

get through there must be many weak points. Perhaps it's more than that; perhaps they wish to discover the particular resonance that does most damage."

"Yes!" said Torg, excitedly. "Yes, of course! They can't really know what's happening here. They are shooting in the dark, as it were. For that matter, they may not even be certain the vibrations are actually penetrating the barriers." He grimaced, wryly. "If only we knew who hates us so determinedly . ."

"Anyway, we've got a basis now for beginning the investigation."

Klandar, his face dark with anger, arrived in time to overhear. "A beginning? I hoped you could report much more than that!" Displeasure sparked from his eyes, mingled with more than a hint of desperation. "Have you been to the city?" he demanded, harshly. "Do you know what is happening there?"

The scientist shook his head. "We've been working all the time."

"Suicides and deaths from overdoses of narcotics have risen sharply overnight. Physicians are besieged by frantic patients pleading for more powerful sleeping draughts. Some even demanding that their ear-drums be pierced. They would prefer deafness for the rest of their lives rather than endure this uproar a minute longer."

Torg was aghast. "Mutilation? But the doctors never consented, surely?"

Klandar gave a short, barking laugh. "It would not help." His next words started cold prickles of horror along the others' spines. "Nothing can halt these devilish noises. Even the deaf can hear-some of them for the first time in their lives. They believed these sounds to be a normal accompaniment to ordinary living. At first they gave thanks for deliverance from affliction. Now their gratitude has turned to curses and they pray to be returned to their former world of silence." He waved away such matters with an impatient hand.

"Individual tragedies and sufferings are innumerable. As Vizier, I must look at the broader aspect. What am I to tell the Grand Council at their assembly in the next hour?"

He listened to Torg's deductions without comment. "The principal factor, to my mind, appears to be this abnormal penetration. Can nothing be done to damp the vibrations, for instance? Sound, you say, travels in different mediums with varying facility? Why, then, not devise mediums through which sound travels only with difficulty—possibly using layers of such materials in the form of additional barriers?"

"Sound possesses strange properties, O Klandar. In many ways it behaves like the waves of light. Two of its most notable qualities are pitch and intensity."

The Vizier pursed his lips. "I associate pitch only with pleasing musical notes. This—this dissonance is merely a noise, not a note."

"Pardon-it is both at the same time. I have analysed the vibrations and find them to be composed of many notes. I mean that the pulses of the sound waves are regular. Only when the pulses are irregular does a noise result. The unpleasantness of what is happening now results from very many wave formations impinging upon one another and causing interference. In fact, what are known as 'beats' comprise big proportions of the component sounds. These may arise from two sources emitting nearly but not quite the same note, giving alternate resonance and interference. At first the waves reinforce each other and we have resonance; then vibrations from the lower-pitched source lag until they are half a vibration behind, whereupon the vibrations oppose each other and we have interference. When the lag amounts to a full vibration we have resonance againand so on. This alternate resonance and interference produces a throbbing effect. I have noted it as occurring at many different points of the scale."

Torg paused for breath. "Then, also," he went on,

"there is the intensity or loudness. This depends on three factors: one, the power of the original pulse; two, the distance from the source of sound and three, the density of the transmitting medium."

Klandar had little patience for painstaking scientific explanation, "Tell me, O Torg, how these sounds may be shut out. That is all I wish to know." He appended an afterthought: "Perhaps, also, what particular enemy is guilty. If we knew that, we might adopt countermeasures of our own." His parting words held little comfort, "Keep working, Time is short-for all of us."

Torg watched him go, then pressed both hands to his temples in a gestures of despair that had now become characteristic. "I cannot think! If there were only a

moment's quiet . . .

But never for a single second did the pitiless clamour abate. On the contrary its continuous whistles, shrieks and gruntings amplified themselves. That, thought Torg, betrayed the fantastic devilry of the attack. The noises in themselves were entirely meaningless-yet the purpose behind them must be deliberate, deadly and remorseless. Every tormenting sound which could possibly be invented was thrown into the uproar.

For entire rotations of the sun-shining with fierce, hot, whiteness against an almost black sky-there beat upon the luckless inhabitants a constant pandemonium of rattling, ringing and reverberation that developed gradually into a twittering vociferation of sound until finally a caterwauling dissonance almost blotted out conversation. The noise was everywhere-above, around and even inside. None could escape. Sleep proved impossible; sanity toppled.

Debates of the Grand Council degenerated into hysterical denunciations of Torg and his colleagues.

"All these years the scientists have boasted about knowing the universe and its secrets," shouted one irate councillor. Much dignity was lost to the proceedings by reason of their being obliged to stand close and bellow into each other's faces in order to be heard above the awful, wailing din. "Now, at the testing time, they fail us!"

"They mutter learnedly of abstruse theories," yelled another. "Yet really they are as ignorant as ordinary men. We have been deceived."

The aged counsellor, tears streaming down his withered cheeks, croaked something about the savants of the period not being one tenth so intelligent as their forefathers, but these words of wisdom were lost in the general uproar.

"Silence!" bawled Klandar. "Silence, all of you!"

As though in sheer mockery of his command, the alien sounds became of even greater intensity, magnifying themselves into a discordant symphony of titanic machines grinding with horrible, urgent rhythm upon some nameless task. From time to time the shattering barrage of noise was struck through by rapid, staccato notes which hit with almost the force of bullets.

"What new horror is this?" demanded a leading counsellor. "These—these blows—this vicious, rotating element?"

"Self-pity will get us nowhere," said Klandar, "Nor will it help to abuse our scientists, who are doing their best. Already they have determined that the noises do, indeed, pass through the barriers. Now they work upon the physical analysis of the sounds—"."

"An enemy!" The words echoed in shouted chorus, followed by attempted babble of debate among the

counsellors themselves.

"Silence!" called Klandar, again, trying to bring some semblance of order to the proceedings. His efforts did not meet with much success. In fact, it quickly became evident that the Grand Council had divided itself into two camps—one optimistically prepared to support Torg and Co. in desperate endeavours to find an answer; the other calling for negotiations to be opened with the enemy;

"The scientists can't ever hope to do it in time."

"How are you going to find this enemy, anyway? We don't even know who he is."

"Treachery! To think of surrender is shameful."

"An honourable peace . . ."

"Renegade!"

"To talk of giving in without even a gesture of resistance!"

"Assassin! Every minute of delay means more lives lost! Think of our citizens' sufferings already——"

"We must negotiate. The people cannot endure this torture!"

The aged counsellor desperately cupped a hand round his ear. "Eh? What did he say?"

Somebody at hand repeated the last remark. "He said we must negotiate with the enemy as soon as we can."

The old one's rheumy eyes summed up the scene shrewdly, seeing how members of rival groups congregated nearer to each other, as if for mutual support. "A skinny forefinger shot out again." "Tratiors, the lot of emil That crowd there, I mean! Our ancestors didn't talk of surrender the other time! They got busy and built the barriers—"

"Shut up, you old fool. You don't know what you're talking about!"

"Eh? What's that? What did you say?"

Klandar raised both arms high. "Attention! Attention! Recrimination will serve no purpose. We must devise a policy. This is a democratic community, and all voices shall be heard. Who, then, votes for continued resistance? And in this connection I should tell you that in the scientists' opinion the enemy is as yet unaware of the damage he has inflicted upon us. He is firing these vibrations blindly at the barriers in the hope that some may get through. So long as he does not know the result our hand is strengthened, and if our nation can only hold out for a little longer..."

"Defy them!" shrieked the ancient counsellor. "We

ourselves must endure, thereby setting the people an example!"

"All very well for you," said somebody. "You're half-deaf. You'd think differently if-" "I can hear vibrations as well as you, can't I? I can

stand it all right. Guts-that's what this modern generation needs. Guts and vinegar! Not this nambypamby-"

Matters were getting out of hand again. Klandar, with a face like thunder, drew a deep breath in readiness for enforcing discipline when an official entered and tugged urgently at his elbow. Remaining counsellors crowded closer, but the words were indistinguishable,

At the conclusion of the message, Klandar nodded briefly, "Very well," He addressed the jostling delegates once more. "Gentlemen-matters have reached a grave and unfortunate climax. Large numbers of citizens are, even now, marching upon this area, demanding parleys with the enemy and a cessation of the noise." He glanced grimly round the cluster of faces. "I do not think their reactions will be particularly pleasant when I have to confess we have no guaranteed means of communicating with the enemy and that we are completely at his mercy. It would be as well if we removed ourselves."

"Cowards!" jeered the old man. "Running away!" He looked at Klandar. "Where shall we go?"

The Vizier shrugged, "Where else than to the scientists? We can only hope they have made progress. In any case, after dealing with us, the mob will undoubtedly seek them as their next victims. Extra numbers may aid our mutual defence."

Thus it came about that while swarms of tormented citizens, maddened beyond endurance by the continued torrent of noise, marched upon the Place of Meeting, their elected leaders slipped quietly and speedily to Torg's location.

"We are trying an experiment," said the scientist. He

spoke low and quickly into Klandar's ear. "It may not succeed in practice, yet the theory is sound."

"Let us hope the test is successful," said the Vizier.
"It is likely to be your last chance—and ours!" He
repeated the news about the questing mobs, but
Torg's expression did not change. "How long before
they arrive here?"

Klandar pointed skywards. "When the sun has moved to that point—no longer."

"It will suffice," said Torg, unemotionally.

"Would it incommode you to explain this theory?"

The scientist studied his labouring assistants for a

moment, then turned away. "There is nothing more I can do. My helpers are now engaged in launching the experiment. Therefore, I have time in which to recall that I explained to you earlier how sound is caused by vibrations in a medium, with pitch depending upon the frequency. Also that dissonance is caused by certain vibrations becoming slightly out of phase."

Klandar nodded. "I remember."

"With sound operating in the form of waves, the theoretical diagram provides a line portraying alternate crests and troughs. Now I wondered what might happen if, instead of being merely slightly out of phase, two waves with the same characteristics coincided exactly—that is, the crest of one matched the trough of the other. Such a test could be made by transmitting experimental sound waves and aligning them out of step with the enemy's beams."

Klandar recoiled in horror. "You mean make additional noise? Is our present affliction not enough? An even greater bombardment of sound upon our unfortunate nation?"

Torg shrugged. "I hope there will be no such manifestation. According to my calculations the two waves ought actually to cancel out each other, thereby leaving—in respect of their own particular vibrations—silence."

Klandar jumped. "You mean you have solved the problem? Not by barriers but by generating additional waves to subdue noises?"

Still unexcited, Torg said: "That is the principle, It has been proved mathematically, now we must prove it in a practical manner. After that we can go to work, for much remains to be done. Every tone, harmonic and overtone throughout our audible scale must be duplicated, otherwise—with the enemy still covering the entire gamut—some vibrations will continue to be tormentingly audible."

The Vizier drew a deep, deep breath. "How soon will you know?"

"In a short time."

Counsellors stood around, watching the preparations. Then one, taking his eyes from the methodical activities of the laboratory staff, uttered a hoarse cry. "Look! Here they come!"

"Who?"

"The mob, of course! Klandar! Torg! You must hide. You, also, old one, if you still value your aged hide. Any counsellors they catch will surely be torn to pieces."

Far in the distance, moving with a peculiarly disturbing purposefulness, could be seen the vanguard of the mob. Behind them streamed the remainder of the citizens in a vast, dark horde. These latter, perhaps, may not have entertained such bloodthirsty thoughts as the ringleaders, but the mere fact of having something to do diverted their minds from the ever-present, maddening noise.

"Back to barbarism," exclaimed Klandar, "Order has departed. Anarchy is upon us. It will be lynch-law unless—" His eyes strayed again to the scientists, and the glances of the counsellors swivelled simultaneously sideways in sympathy. He stared meaningly deep into Torg's eyes. "Now the responsibility is yours, Master Physicist! I can do no more until you have conquered the noise."

The scientist sighed. "We are doing our best."

The concourse grew uncomfortably near. Most uncanny aspect of its approach lay in the fact that no menaing growls or threatening cries could be detected through the blanketing uproar of whistles, shriefs and oscillating howls which still numbed the brain and sawed at frayed nerves. For all that anyone knew, the ominous, slowlylooming figures could have been moving in murderous silence.

A few of the counsellors began to panic and look round wildly for ways of escape, among them the aged statesman who had been so confident that his generation possessed superior heroism.

Klandar, noticing, smiled sardonically. "Do not worry, gentlemen. They will not kill us all. Some must survive to act as skilled negotiators and carry out the citizens' desires for parlevs with the enemy."

Leading ranks saw the group of counsellors and scientists huddled there forlornly. Arms thrust themselves out, heads turned over shoulders to announce the fact to those unable to see.

"Torg," said Klandar, sharply. "Is there any hope? have your men reached the point of definite action?"

Now, with heightened emotion, the noise tore and slashed at quivering brain-matter until every man felt his entire being shriek aloud for mercy.

"Look!" cried the old counsellor, in quavering tones. "Look what they're doing now!"

He had good reason for additional apprehension. The rabble had not entirely lost its reasoning. It had divided into two portions—one of which crept to the right, the other to the left in a deliberate encircling motion.

"We're being surrounded. Quick, Klandar! Order these scientists to act immediately! Kill one or two of them to encourage the others, if necessary."

"Peace!" said the Vizier. "You do not realise what you are saying! In normal times I would have impeached

you before the Grand Inquisition for such a suggestion. Let us not forget that those of us here represent principles of civilisation that must remain eternal, whatever the mob may do."

The crazed rabble were all around them now. Taut, prevailing terror infected even Torg, so that he began to tremble. "Hurry!" he called to his assistants, in hoarse tones. "Hurry!"

The veteran counsellor wiped drooling lips with the back of his hand. "I'm an old man—I haven't long to live, anyway." His voice whined. "It's not fair that I, already so near the grave, should die in this manner.—"

The others took no notice. Most members of the Grand Council stared in hypnotised horror as the mob closed upon them. A few prostrated themselves, praying to the gods for deliverance.

Then the rabble began to run forward—its leading ranks presenting rows of wildly rolling eyeballs and bared teeth, with arms raised and hooked fingers seeming like talons, ready to tear.

But suddenly—so unexpectedly and unobserved that the realisation hit everyone with a stunning shock—they were running in silence. Next instant they halted, petrified with astonishment.

The noise had ceased. There remained only the peculiar aftermath of a ringing in tortured ears, for so long accustomed to frenetic uproar.

For ten long seconds the hush seemed even more dreadful than the enemy's noise. After that came a moment of unbearable suspense for the counsellors.

Klandar turned to Torg with eyes so dreadful that the scientist could not bear to meet them. "We have won?" he demanded, tremulously. "We have won—or has the enemy merely paused to await our surrender?"

Torg kept his gaze averted. His words fell slowly, like pebbles dropped into a still pool, each leaving its widening ripples. "We...have...won..."

Together they stared far down towards Earth. Between gaps in the enveloping cloud they saw dark, green-brown land masses. Whatever creatures dwelt there no longer constituted a menace.

In ages long past, when electrical potentials floating in the planet's atmosphere broke down in flashes that sent violent explosions crashing through the ether, their ancestors had built the ionised protective barriers in the upper air. For while the grosser living things of Earth heard merely the thunder in disturbed air after a lightning flash, the more ethereal beings in the realm of Empyrean were attuned to etheric vibrations, which came to them as "sound."

Now there had been this new, more terrible manifestation rising from the planet's surface to where Klandar and his people dwelt beyond the stratosphere. But it had been beaten, even though the noises succeeded in penetrating what men call the Heaviside and Appleton layers.

"The vibrations really do cancel out one another," reflected Torg, with well-deserved satisfaction. "We have won."

Counter-vibrations from the massed forces of Empyrean pulsed out victoriously, covering the entire range of wave-lengths.

And down on Earth, every spark-coil, radio telephone, broadcasting station, television service and radar system fell mysteriously and permanently silent.

s-f handbook

Watt — Electrical unit of power expressed as the energy used up in a second when a current of one ampere passes through a system with a potential difference of one volt. Watts are the product of volts times amperes.

Wave-length—The distance between equivalent points along a wave, e.g., crests or troughs.

Ware mechanics—A theory of atomic structure put forward by Louis de Broglis in 1924, in which electrons are considered as were phenomena cless to the tions in a series of definite frequencies which correspond to the energy levels of the atom. The "ware" is not regarded as this would entail a multidimensional hyperspace. "Wave" terminology is used in order to express the mathematical relations involved.

Wave number—Reciprocal of the wave-length, being the number of waves in unit distance.

number of waves in unit distance.

Work—Phenomenon whereby a force acts on a body in such
a way that motion results. If a

force F acts on a body and its point of application moves a distance s in a direction making an angle (theta) with the direction of F, then the force is said to do an amount of work Fs cos θ on the body.

X-rays—Electromagnetic waves of length from 5X10-7 to 6X10-70 cm., produced when matter is bombarded by cathode rays.

X-ray spectrum—Individual spectrum produced when an element is bombarded by cathode rays.

Young's Modulus—Reciprocal of stress to longitudinal strain in a cross-section of rod or wire.

Zenith—The point on the celestial sphere that is immediately

ately above the observer.

Zodiac—That part of the celestial sphere that contains the paths of Sun, Moon and planets. It is divided into twelve portions named after constellations.

Didyou know that this Handbook, of which this is the conclusion, is being revised, enlarged, and published in book form? It will be given free to all new subscribers as soon as it is available.

THE OLD MAN OF THE STARS is the title of J. F. Burke's fine long story in our next issue. A long-

short, Conversation Piece, comes from E. C. Tubb, and a new author, Arthur Sellings makes his debut with The Hauring, Macleod Robertson's story, Megalocoms, is the second published winner in our amateur authors' competition. To replace the S-F Handbook we shall include the first in a new series of articles dealing with SF topics, and, of course, all the usual features.

AUTHENTIC-A MONTHLY MUST!

We are pleased to present here the first winning story in our amateur authors' competition. We think

it has professional standard.

Do you agree?

The Piper

by ALAN HUNTER

If the small town on the bank of the river, resting between gentle hills like children's bricks on a Nothing stirred in the narrow cobblestone streets. And in the houses, with their sagging gabled roofs, silence reigned—from the children sleeping in the atties to the rats creeping in the cellars. The river murmured to itself in the moonlight.

And nobody saw the long shadow that passed over the moon, or the hill that vanished soundlessly, to be replaced by the spreading bulk of the starship that descended quietly from the sky.

Quossi and the Greater Öne left the starship in an aerial scooter, to survey the town. As the pilot's nimble tentacles guided the scooter, Quossi glanced back at the 'unaltered skyline where the starship rested and allowed amusement to ripple through his thoughts. He wondered idly how such a quiet corner of a primitive planet would react if this camouflage had not been quite so perfect.

The Greater One caught an echo of Quossi's thought and turned. "This is no time for idle speculation," he transmitted mentally. "We are here on important business." Quossi made no reply to the reprimand.

The Greater One then addressed his thoughts to the pilot. "We will not go into the town lest we rouse the inhabitants, Land near that large clump of vegetation beside the river. I can sense dormant life vibrations from there—a mammal of intelligence."

He was correct. They found a wandering minstrel sleeping under the stars, near the bank of the river. Without waking him, the Greater One delved deep into the minstrel's memory and learned many strange things about the customs of this planet.

As the scooter was returning to the parent ship, plans were made for Quossi's entry into the town at daybreak, complete with breathing apparatus and disguise.

Daybreak came, and as the townspeople began the tasks of a new day, many saw a brightly-clad ministrel, flute in hand, gaily tripping across the cobblestones towards the Council Hall. His flamboyant costume and jaunty air created not a little interest, but neither Quossi nor the Greater One understood enough as yet about the inhabitants of this planet to realise how idealised were all their memories—even those of a wayside ministrel. But the disguise worked well, for who could sense danger in a lone musician?

Quossi noted with interest the energetic children, whose voices rose with excitement when they saw him, and the rats which, to his subtle senses, seemed to be everywhere. Lurking in dark corners, the rats darted between the feet of passers-by, more nimble even than the children.

He broadcast his first report to the starship. The answer returned: Obtain living samples of the small four-legged creatures for preliminary investigation, but do not antagonise the larger inhabitants, or rouse their suspicions.

This seemed quite a problem to Quossi, until he entered the market square. It lay at the centre of the town and was quiet in this early hour. Facing him at the far side was the arched entrance to the Town Hall, surmounted by a clock tower. Beside this entrance was a notice.

With a finger of mental suggestion, Quossi turned the head of a passing inhabitant towards the notice and scanned the thoughts that formed involuntarily in the creature's mind. Quossi was delighted. The notice was a proclamation which promised a fitting reward to anyone who could devise a way of ridding the town of its rats, which were apparently becoming a menace to the townspeople. It was signed by the Mayor and included instructions for finding this dignitary, even at this early hour of the day.

The minstrel entered the arched doorway. "What is your business, and how are you addressed?" challenged the door-keeper, surprised to discover anyone calling on the Mayor so early, and in such gay attire. The sounds made no sense to Quossi, but he read the challenge in the man's mind. He dealt with it in his own way and then entered the central hall, and from there passed directly to the Mayor's office.

Surprised in the middle of a huge yawn, the Mayor nearly choked himself as the minstrel entered unannounced. He was about to vent his wrath on this intruder when the thought blossomed in his mind that the minstrel was surely an old and cherished friend. Quossi waited until he was certain this mental suggestion had been accepted.

"I have come about the menace of the little creatures," said Quossi—or, at least, the Mayor thought the words were spoken, for he had never experienced telepathy before.

"Do you refer to the children, or the rats?" laughed the Mayor, deliberately misunderstanding. For reasons he could not understand he had suddenly fallen into a rare good humour. "It seems to me we have far too many of both, and I don't know which is the worst menace in this town. At least my carriage does not have to stop if a rat runs in front of the wheels!"

Quossi, keeping his jubilation carefully under control, replied calmly: "I can do something for you with both problems,"

"By all means," boomed the Mayor. "But first I

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suggest you concentrate on the rats." He laughed jovially.

"How many do you wish me to remove?"

The Mayor, no doubt thinking his visitor was referring only to rats, replied: "As many as you can—we don't want any of them!"

"Certainly," replied the minstrel. "By tomorrow morning the rats will be gone. Then I will see about the children."

"You will be the death of me!" laughed the Mayor.

When he stopped laughing, and wiped the tears from his eyes, his visitor had left.

Late that night, when the townspeople and their children were all soundly asleep, the minstrel stood outside the town, on the bank of the river, and raised a flute to his lips. The flute was a compact vibrator, but the disguise was maintained in case he should be seen.

As the vibrations, unheard by human ears, quivered on the night air, a vast scurrying and squeaking arose. Children stirred in their beds but did not awake, as rats of various colours and sizes flowed from the houses and along the cobbled streets, hypnotised by the alien notes. A few of the older townspeople, roused from fiftul slumber, watched from the safety of their bedroom windows.

Several of them then agreed that they saw an impossible thing. Where the river had never flowed in living memory, water suddenly ran sparkling in the moonlight across the path of the prancing minstrel. Without hesitation Quossi entered the water and vanished. The rats followed.

"You have done well," the Greater Ones praised when the spatial warp had deposited Quossi in a receptor, and almost one million rats in a specially prepared cubicle in the laboratory of the great starship. "Almost too well," they added, surveying the churning bodies with distaste. "As soon as we have investigated some of these creatures we will give you further instructions."

A few hours later the report was complete. Following much abstruse terminology, which really amounted to very little, their findings were summarised as follow: "As suspected, the inhabitants of this planet are oxygen-breathers. This difficulty can easily be overcome, and the life forms here are naturally resourceful and full of vitality. These specimens, of course, are of low intelligence, but there is little doubt that the larger creatures observed on this planet will be ideal for our needs."

It was then that Quossi recounted, in full, his talk with the Mayor. The Greater Ones were most interested in the part about the children.

The following day Quossi entered the town again. This time the streets were empty—not only of rats, but of the children as well. He was aware that a few of the older inhabitants regarded him carefully from windows and street corners, but they slipped away when he tried to focus his mind on them. By the time he reached the Town Hall, Quossi knew a great uneasiness. Something was wrong, but he knew too little of the mentality of these creatures to understand what it could be.

There was no door-keeper at the Town Hall and the Mayor showed an obvious uncertainty when Quossi entered his office. It took the alien a fraction of a second to know that twenty townspeople were waiting in hiding within, or just outside, the room.

"Begone!" roared the Mayor in the blustering tones of a person half scared to death. "We wish to have no trade with Black Magic. Bring the rats back if you choose, but we will not pay a reward." And the Mayor crossed himself on the chest with his right hand.

This meant nothing at all to Quossi. Realising that he was completely out of touch with the turn of events, the alien replied mildly, "But I have come for no reward.

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I seek only to help you further and rid you now of your second menace."

The Mayor was too upset to try to understand this statement, and in any case he had completely forgotten his feeble joke of the day before. Raising an arm, he thundered, "Leave this town immediately. If you refuse—" the Mayor's thunder began to tremble and weaken, "—we—we will d-drive you out!"

As if this were a signal, the far door opened and the hidden citizens became visible, half of them through the doorway and half rising like puppets from behind articles of furniture.

Quossi knew he was beaten by the bewildering complexity of these creatures' mentality. He glanced about, exerted a little mental pressure, and walked dejectedly from the room. Behind him twenty men suddenly looked with puzzled eyes at the swords in their hands, and the Mayor began to weep. They had forgotten all about a minstrel who used black magic.

Several of the hiding townspeople saw a prancing minstrel leave the Town Hall, for the image vibrator was unaffected by the moods of the creature it concealed. At the outskirts of the town Quossi halted. He had failed in the strict observance of his orders—the townspeople were obviously antagonistic and suspicious—but his objectives remained the same.

He appeared to raise the flute to his lips and blow. From the camouflaged instrument a strange music emanated, music that the men and women of the town could only partially hear. But the ones for whom the music was intended heard it well enough.

From the houses ran shouting children. Parents wept, prayed, and tried to hold them back by force, but the children swept them aside to follow whither the music led. At the head of the laughing, jostling throng danced the minstrel in his gaily coloured costume. At the rear stumbled a lame boy, tears in his eyes because

his crutches could not match the nimble feet of his fellows.

The townspeople watched helplessly while the procession raced towards the hills. If they tried to attack the minstrel they risked injuring the children, and if they tried to halt the children they risked injury to themselves. As they hesitated, arguing among themselves, the sound of the children's voices stopped abruptly. Then followed a faint tremor in the ground and a great shadow swept across the sky. All the children had vanished—except the lame boy who lay crying, with a twisted ankle, beyond the town. It was a long time before his heart stopped aching, at the memory of all the music had promised and which only he had missed, long enough to allow him to tell what he had seen.

"They followed the minstrel, and suddenly a hill opened. When they were all inside it closed. Then the hill seemed to go all blurry and a great big shadow rose into the sky."

And that was all he could say. To the townspeople, the hill, which had automatically warped back into place when the starship departed, appeared unchanged.

The children were never seen again.

Extract from a diary: "I am pleased with my progress in mastering written English. To-day, as an exercise, I wrote an account of our first expedition, amplified by the additional insight I have gained into the mentality and habits of these creatures.

"It is surprising how they have advanced since our first visit—no wonder their young provide such good stock for our slave colonies.

"Quossi had a far easier job. This time much more preparation and guile will be needed, necessitating for instance a complete knowledge of local language. But I am in the largest city on the planet, so the gain will be considerably greater.

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"While studying some of their literature I discovered that a garbled account of Quossi's adventure has survived as a 'folk tale' or legend. I might try to get my own account published, for it is about time these creatures were told the truth of the matter. No harm can be done, as few will believe, particularly if it appears in the type of magazine I have in mind.

"When all the children in London disappear they may begin to believe, but then it will be too late.

"I wonder what kind of legend that will become in future years?"



THE SHINING ARK

by Brindley Ford

"HY can't I see the Ark now, mother?" asked the child.

"Because it is too dark. It was late when we arrived here, and the sun had gone down behind the hills, and there is no moon tonight."

The little girl looked sad. "When shall I see it then?" she asked.

"At sunrise. But you must go to sleep now or you will be too tired to wake up in the morning." And the woman laid the child down on the soft bed.

"Tell me a story first," pleaded the child. "Tell me the story of the Ark."

"Oh, very well."

The child snuggled down between the warm blankets, excitement in her eyes. Her mother sat down beside her and began the story....

"Well, once upon a time there lived on Earth a race of supermen. These men were like gods, and they could do all manner of wonderful things. They lived in huge cities, and their houses were made of glass. And when the sun vanished in the evening and the world grew cold they could turn on little artificial suns which gave them light and warmth and made their cities as bright as day. Then they had machines which could carry them across the land at tremendous speed, much faster than the fastest horse can gallop. They could also travel underneath their cities, deep down in the earth, and sail across the vast occans of water in great floating palaces, and, most wonderful of all, they could fig."

The child's eyes shone. "How wonderful they must have been," she said, softly. "To think that they could fly, like the brids..." She was silent for a moment. Then she said: "And what happened to them?"

"Well, although they could do all these wonderful things, and many more," continued her mother, "they were not happy among themselves and they used to fight and quarrel. And gradually their weapons became more powerful, and more and more peeple were killed when they fought. Until at last they learned how to release the energy which makes the plant grow, and they are to be supported to the plant grow, and they are to be supported to the plant grow, and they are to be supported to the plant grow, and they are to be supported to the plant grow, and they are to be supported to the plant grow, and they are to be supported to the plant grow, and they are to be supported to the plant grow and they are to be supported to the plant grow and they are to be supported to the plant grow and they are to the plant grow and they are to the grow and they are to the plant grow and they are to the grow and they are they ar

The child was serious now, staring into the darkness. "David, the teacher, has told us about the Atomic War. How awful if must have been. David says that the supermen's machines were evil, and that is why we are not allowed to make them." After a pause the child went on: "Tye seen the Ark, haven't I, mother?"

"Yes child. You saw it on the last pilgrimage, a year ago,"

"I think it's beautiful. How it shines! Go on, mother."

"Well, there was one man, a scientist, named Noah, who foresaw what was going to happen, so he built the Ark, high up on a lonely mountain... this mountain. He made it from a secret material, strong enough to resist the bombs, strong enough to last until the end of time. Inside he stocked food and water, and made his own air.

"Then he took inside a male and female of all the animals and birds he thought ought to survive. And when the War came and he saw that the supermen were going to destroy themselves and poison the Earth's atmosphere he took his family, and one other family, into the Ark, and closed the doors. He stayed inside for many months and then he tested the atmosphere by releasing birds, first a raven and then a dove."

The child was now asleep, breathing quietly. Her mother again drew the blankets, made of animal furs, around the child, and kissed her forehead. She went on, speaking to herself now:

"And when the dove returned with a flower in its beak he knew that it was safe for him to open the door and go out into the world again. When the Ark was empty he sealed the doors and told the people that they must create a new race, and live simply, with no machines and no wars."

The mother went to the door of the tent and looked out. The night was bitterly cold but she did not seem to notice it, although her clothes were made only of a coarse woven cloth. On the mountainside hundreds of camp fires were twinkling, for many people made the annual pilgrimage to the Ark at sunrise on the first day of summer. Involuntarily she looked upwards, towards the plateau on which the Ark rested, alone and inviolate, for it was a sacred thing. But the darkness hid it from view. Then she went away to her own tent, and her husband. One by one, all over the mountainside, the fires died out, and in the dark heavens the moon appeared, rising rapidly, and casting a feeble light over the sleeping multitude.

A few hours later, before dawn, and while it was still dark, the people arose and began to climb up to the plateau. As the horizon behind them flushed, almost imperceptibly, with the first weak light of the approaching sun, it could be seen that their bodies, although human, were subtly different. The legs were shorter, the trunks longer and the chests more powerful. Men, women and children wore their hair long, and their skin was brown, like leather. As they climbed the hill they fell naturally

AUTHENTIC SCIENCE FICTION

into small groups or clans, each led by a Teacher or Priest. It was thus that they had made the pilgrimage, each clan coming from a different region, and for some the journey had meant weeks of toiling across barren lands and deserts, or a slow hacking progress through thick jungles.

At last they reached the edge of the plateau and there they spread out to form a wide semi-circle, ten or twelve deep, in front of the vast, shadowy Ark which loomed before them. At a sign from the Priests they fell on their knees and began to chant a monotonous prayer. The sky behind them grew ever brighter and the tempo of their voices increased as they worked themselves into a fury of religious ecstasy. Then, as the rim of the blazing sun appeared, dispersing the mists and shadows, filling the air with light and warmth, they prostrated themselves, and cried out with one voice:

"The Ark! The Ark!"

High above them the first brilliant beams of the summer sun caught the tip of a gigantic structure. Slowly the rays slid down the massive girth of the hull, past the portholes, past the fins and firing tubes, until the whole of the huge silver spaceship was revealed, shining like a jewel in the morning sunlight. It was still without blemish. Noah had built better than he knew, when, a thousand years previously, he had planned this lonely journey of escape from Earth to Mars.

FANZINES

Fanfare for the rebirth of a British fanzine! And a direct for the death of an old one! After three years of spasmodic appearances, Phantasmagoria has, more or less quietly, passed into the crowded limbo of such publications. Many will be sorry to see it go, but their grief should be short-lived, for its editor, Derek Pickles, is collaborating with Harry Turner in the revival of Zenith, a fanzine that lansed in the early days of the war. The first issue is out and costs a shilling. As yet it is small-only twentythree pages-but it will grow. we are sure. But these twentythree pages are really goodneatly, tidily and cleverly laid out and reproduced. Artwork is good if not too plentiful (medals to Denness Morton and Henry Ernst)-and it is printed artwork, not the blotchy stencil stuff that so many fanzine artists mismanage. The content. too, is of high standard; adult, independent and entertaining. We are pleased to see this new fanmag and only hope the editors can keep it going, for it is a credit to fandom. Like most fanzines, it needs con-

tributors and subscribers, so why not send something—with 3/- for the first three issues—to Derek Pickles, 22 Marshfield Place. Bradford. Yorkshire.

Almost like another rebirth is the current issue of Astroneer (first issue of which we reviewed rather harshly in our number 27). This present issue is very different indeed. Apparently, letters of helpful advice poured in from readers, and many suggestions were implemented, And what a difference it makes! Before, Astroneer was sloppily produced and badly illustrated. Now, it has a standing and a stature of its own. It could endure. The production standard is getting on for excellent, the art-work is quite competent and sometimes inspired. Content is well up to fanzine standard and we have a suspicion that it will improve. Astroneer is a quarterly publication of the Nor'west Science Fantasy Club and can be subscribed to for 4/- a year from Philip Turner, 9 Willow Bank, Church Lane, Moston,

Manchester 9



Better and better come the anthologies from Grayson and Grayson. The Italest is Beyond Human Ken, edited by Judith Merril and costing 9/6. It is a bumper book of fourteen reprints from American magazines and one unpublished story. British authors are represented by Eric Frank Russell and John Christopher, and the American writers include Robert A. Heinkin, Murray Leinster, Lester del Ray and Theodors Surgeon—anness that guarantee good reading. The magazines from which the stories come include Galaxy, Astounding Science Fiction and the Magazine of Fantaxy and Science Fiction—mames with a similar guarantoe.

Judith Merril is to be admired for her taste, and we should have liked some kind of preface from her. There is no doubt that each of these stories deserved preservation in permanent book form. All hail to firsyon for doing it at such a reasonable price!

It is certainly pleasant to see the older, bigger guns among British publishers including science fiction in their lists, especially when the gun is as big as Cassell and the science fiction is as good as Great Stories of Science Fiction. This is an anthology edited by Murray Leinster. Its price is quite high—157—but it contains twelvel tongish reprint stories by such American authors as Theodore Surgeon, Anthony Boucher and Murray Leinster himself.

There are 318 pages to the book, of which twenty-four are used for titles, Introduction and Preface. That makes 294 pages of fiction—for 15/s. This does not compare very well with the first book reviewed here—the standard of production, as well as the literary value, of the two books does not seem graefly different, and to our minds the discrepancy of 5/6 in price appears rather a lot for its sixty extra pages.

For a non-fiction science book that has all the charm of a smooth-flowing, exciting novel, you can do little better than read The Story of the Oceans, by John Scott Douglas (Frederick Muller, 15/s). This really is a first-state account of this topic, lively, enticlingly readable, informative, instructive and, as far as we can judge, serupulously accurate. The chapter titles will give you an idea of its scope: Explorers of the Depths; Lands Beneath the Ocean; The Fart-Flowing Tides, Whis Intores of the Sea, The Sweeping Canadians of the Ocean; Lands of the Carlot of the Ocean; Lands of the Ocean; Lan

Here are 264 pages of high delight for anyone who has the slightest interest in the world around him. Fifteen photographs and charts graphically portray the subject matter of the book. And a very good Index completes one of the finest volumes on this subject that this roviewer has ever seen—and he has seen a great many. Please buy it—even if you have to starve for a week.

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* * * STAR LETTER * * I have been a science fiction fan for many years now but I can honestly say that your magazine is by far the most interesting and progressive on the subject that I have ever come across. There are a few suggestions, however, that I should like to make if I may. Firstly, it would be a great advantage if your SF Handbook could be in more condensed tyne, thereby allowing more of this very interesting section to be included in each issue. Also if it could be arranged for it to include more terms than are included in the actual issue. The idea of printing your title in black has definitely improved the cover, and the frontispieces are really something new-your artist has my sincerest compliments. In your article on the Sun, the density is given as 1.41 grams/c.cm Should this not be 1.4? Your story Mind Within Mind was superb: let's

have more on these lines. I could not reconcile myself to the story Old Man Henderson, because I do not think that the first lunar explorer would ever be ridiculed, and somehow it seems wrong to suppose such a thing. Anyway, carry on with your good work and stick close to your title. There are so very many magazines about which call themselves science fiction books but are no more than fantastic wanderings of poor surrealistically minded authors. Yours is science fiction and nothing but science fiction. It is refreshing.

A. Russell, 61 Chislehurst Road, Chislehurst, Kent.

Six non-fiction books should have reached you by now, Mr. Russell, as our appreciation for your comments and suggestions. Did you know that a revised and greatly enlarged Handbook is to be given free to new subscribers? The density of the Sun that we gave is taken from the work of Professor W. H. McCrea, Physics of the Sun and Stars. We haven't been able to measure it ourselves! You may be right about the first lunar explorer, but plenty of similar men have been ridiculed both before and after their triumphs. Let's hope you're right, anyway.

SF LIBRARY

I would be very grateful if you could let your readers in the Manchester area know that I run a science fiction library for personal callers. The charge is 2d, per book or magazine. This is to cover cost of repairs and replacements. There are here over 800 books on science fiction and astronomy.

A. Tomlinson, 38 Brynorme Rd., Crumpsall Green, Manchester 8,

We hope our Manchester readers take advantage of your offer, Mr. Tomlinson. Your charges are certainly very reasonable.

SUDDEN URGE

Having been first introduced to science fiction at the age of 14-six years ago-and a reader of your magazine since number one. I had a sudden urge to write and tell you what I think of Authentic, Stories I would most like to read again: Mind Within Mind-I think it makes quite a change to have a race living side by side with us on Earth and not fighting with us for possession of it. Never Been Kissed-a nice little story. Any of Ray Bradbury's or Jon J. Deegan's, Authors I would most like to see more of: Ray Bradbury, Jon J. Deegan, Roy Sheldon, I'm glad you've stopped serials; it's hard enough for me to wait a week to find out what happens next, let alone a month.

Helen M. Newsam, 21 Leinster Sq. Bayswater, London, W2.

Glad you find us to your liking, Helen, and we'll try to give you more of your favourite authors. BOTTLE FEED

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you know. 4035793 Cpl. Sempill, C., Billet D4, 4 Sqdn., 109 M.U., R.A.F., Abyad, M.E.A.F. 15, M.E.F. Corporal, you certainly write to us from the most improbable

to us from the most improbable addresses! But we're glad Authentic manages to follow your meanderings. About this pen pal of yours—you've picked the right diet for her, but tell us: how do you get Authentic into a bottle?

DISGUSTING

I hope you will make space available for a reply to the pathetically sanctimonious outburst of minor writer John Christopher, which you ran as guest article in issue 32. It showed a disgusting attitude to life and literature that one encounters often in the business world, but does not expect to find in a science fiction magazine. The opening sentences of Christopher's harangue (can he play the tambourine?) throw light on today's moral position to which the writer is apparently blind, though it is he who brings the matter up. As he says, the young technician is out of step with today's moral standards. But the technician, despite Bernard Shaw, besides being the principal reader and writer of science fiction, is in the advance guard of the changing values of today. If science fiction would make any claim to being significant literature, it must treat not only sex, but moral attitudes themselves, fully and sincerely, when these are relevant to a particular story. Humorous treatments of these subjects, which would undoubtedly be frowned upon by John Christopher, can also contribute a lot to the speculative thought that is science fiction. It is indeed a fitting climax to Christopher's ramblings that he should hold up Bradbury's psychopathic and sadistic fiction as an example of moral virtues. I was really sorry to see this appear in Authentic. and sincerely hope it does not represent your own opinion. R. Douglas Nicholson, c/o Post Office, Ballarat, Victoria,

Australia. We are pleased to hear your views, Mr. Nicholson, but we feel that you have written this letter in a little too much heat. We have commented at length on this topic elsewhere (Symposium on Sex and Sadism in Current Science Fiction, Price 1/9 from D. Gardner, 63 Island Road, Garston, Liverpool 19) and cannot spare the space to go into it again. But there are one or two things we can say, You call John Christopher a minor writer, Did you know he won an Atlantic Award for Literature? Few people do, because John doesn't spread it about, And what exactly is your evidence for claiming that the principle reader of science fiction is the technician? And how do you know

that the technician is in the advance guard of the changing values of today or any day? You feel these things, perhaps. So John Christopher feels the things the talks about. But read that Symposium if you can, for it will make John's position clearer than his very short article could. And keep writing.

DULL BRITISH

I have just bought my first issue of your so-called new layout, and I must say it is much better than the earlier issues, but-oh!-the paper, it's just appalling! I don't mind telling you that I have another monthly science fiction book and the paper on these books is lovely. I might also add that it is an American book and that it took American authors to get me interested in science fiction. Our British writers seem to lack imagination in this field of writing. I like very much your articles on the Solar System, so please keep it up. I should like to say something about your covers. Couldn't you get a stiffer cover? My cover this month is all ripped about. Yes. you are doing fine work in the British science fiction field, so please keep it up. Brian A. Read, 31 Darwin Drive.

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THIS MONTH'S COVER

portrays the moment of release of the first stage in our threestep orbital rocket. An initial thrust of 14,000 tons has sent the rocket hurtiling from the ground at an acceleration of about 30 feet per second per second. Five and a quarter thousand tons of fuel have been used up at the rate of 60 tons a second, raising the 7,000-ton ship to a height of about 25 miles. Yet the fuel sends streaming flames from the 65 ft. diameter jet for only 85 seconds.

Now, the first stage of the rocket is fuelless and is dropping back to Earth by parachute. When the rocket reaches a height of 40 miles, the second stage will similarly fall away, and the last stage will streak onwards to reach a height of 63 miles before the fuel is exhausted. It will then be travelling at 18,500 m.p.h and will glide into a permanent orbit just over a thousand miles from Earth, with a velocity of nearly 16,000 m.p.h.

There we meet it again next month, and see the assembly of a space station!

(This series of documentary paintings began with the July issue, No. 35. A few copies of numbers 35 and 36 are still available.)